

# SAFETY DATA SHEET



ANALT-B Quality Control Standard, Part Number 190065100

## Section 1. Identification

**Product identifier** : ANALT-B Quality Control Standard, Part Number 190065100  
**Part no.** : 190065100

### Relevant identified uses of the substance or mixture and uses advised against

**Material uses** : Reagents and Standards for Analytical Chemistry Laboratory Use  
 500 ml

**Supplier/Manufacturer** : Agilent Technologies Australia Pty Ltd  
 679 Springvale Road  
 Mulgrave  
 Victoria 3170, Australia  
 1800 802 402

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(61)-290372994

## Section 2. Hazard(s) identification

### Classification of the substance or mixture

H290 CORROSIVE TO METALS - Category 1  
 H314 SKIN CORROSION/IRRITATION - Category 1  
 H318 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1  
 H400 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1  
 H410 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1

### GHS label elements

**Hazard pictograms** :



**Signal word** : DANGER

**Hazard statements** : H290 - May be corrosive to metals.  
 H314 - Causes severe skin burns and eye damage.  
 H410 - Very toxic to aquatic life with long lasting effects.

### Precautionary statements

**Prevention** : P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.  
 P234 - Keep only in original container.  
 P273 - Avoid release to the environment.  
 P264 - Wash hands thoroughly after handling.

**Response** : P391 - Collect spillage.  
 P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician.  
 P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.  
 P303 + P361 + P353 + P363 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.  
 P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

## Section 2. Hazard(s) identification

- Storage** : P405 - Store locked up.  
P406 - Store in corrosive resistant container with a resistant inner liner.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements**
- Additional warning phrases** : Not applicable.

**Other hazards which do not result in classification** : Causes digestive tract burns.

## Section 3. Composition and ingredient information

**Substance/mixture** : Mixture

### CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
Nitric acid	≤10	7697-37-2
Cadmium	<0.1	7440-43-9

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

## Section 4. First aid measures

Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns.
- Ingestion** : Corrosive to the digestive tract. Causes burns.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
nitrogen oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 5. Firefighting measures

Hazchem code : 2X

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

### Methods and material for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in corrosive resistant container with a resistant inner liner. Store locked up. Separate from alkalis. Keep away from metals. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls and personal protection

### Control parameters

### Occupational exposure limits

## Section 8. Exposure controls and personal protection

Ingredient name	Exposure limits
Nitric acid	<b>Safe Work Australia (Australia, 1/2014).</b> STEL: 10 mg/m <sup>3</sup> 15 minutes. STEL: 4 ppm 15 minutes. TWA: 5.2 mg/m <sup>3</sup> 8 hours. TWA: 2 ppm 8 hours.
Cadmium	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 0.01 mg/m <sup>3</sup> , (as Cd) 8 hours.

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid. [Clear.]
- Colour** : Light
- Odour** : Odourless.
- Odour threshold** : Not available.
- pH** : Acidic.

## Section 9. Physical and chemical properties

<b>Melting point</b>	: 0°C (32°F)
<b>Boiling point</b>	: 100°C (212°F)
<b>Flash point</b>	: Not available.
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Not applicable.
<b>Lower and upper explosive (flammable) limits</b>	: Not available.
<b>Vapour pressure</b>	: Not available.
<b>Vapour density</b>	: Not available.
<b>Relative density</b>	: 1
<b>Solubility</b>	: Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Not available.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: No specific data.
<b>Incompatible materials</b>	: <ul style="list-style-type: none"> <li>Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.</li> <li>Reactive or incompatible with the following materials:               <ul style="list-style-type: none"> <li>alkalis</li> <li>metals</li> </ul> </li> <li>Reactive or incompatible with the following materials: oxidizing materials.</li> </ul>
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
nitric acid	LC50 Inhalation Vapour LC50 Inhalation Vapour	Rat Rat	2500 ppm 130 mg/m <sup>3</sup>	1 hours 4 hours

#### Irritation/Corrosion

Not available.

#### Sensitisation

Not available.

#### Mutagenicity

**Conclusion/Summary** : Not available.

#### Carcinogenicity

## Section 11. Toxicological information

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Cadmium	Category 1	Not determined	Not determined

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

**Eye contact** : Causes serious eye damage.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes severe burns.  
**Ingestion** : Corrosive to the digestive tract. Causes burns.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
 pain  
 watering  
 redness  
**Inhalation** : No specific data.  
**Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur  
**Ingestion** : Adverse symptoms may include the following:  
 stomach pains

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.



## Section 11. Toxicological information

**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Not available.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
nitric acid	Acute LC50 180000 µg/l Marine water	Crustaceans - Carcinus maenas - Adult	48 hours
Cadmium	Acute LC50 72 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
	Acute EC50 97 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute EC50 0.095 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 200 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute EC50 13.5 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 0.072 µg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours
	Acute LC50 1 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 2 µg/l Fresh water	Algae - Parachlorella kessleri - Exponential growth phase	72 hours
	Chronic NOEC 0.02 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
nitric acid	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
nitric acid	-0.21	-	low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations





**Disposal methods** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and



## Section 13. Disposal considerations

its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	ADG	IMDG	IATA
UN number	UN3264	UN3264	UN3264
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid)	Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid)
Transport hazard class(es)	8 	8  	8 
Packing group	III	III	III
Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.

### Additional information

ADG	: <b>Hazchem code</b> 2X <b>Special provisions</b> 223, 274
IMDG	: The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. <b>Emergency schedules</b> F-A, S-B <b>Special provisions</b> 223, 274
IATA	: The environmentally hazardous substance mark may appear if required by other transportation regulations. <b>Quantity limitation</b> Passenger and Cargo Aircraft: 5 L. Packaging instructions: 852. Cargo Aircraft Only: 60 L. Packaging instructions: 856. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y841. <b>Special provisions</b> A3, A803

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of Marpol and the IBC Code** : Not available.

## Section 15. Regulatory information

### Standard Uniform Schedule of Medicine and Poisons

6, 5

### Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

Not listed.

## Section 15. Regulatory information

### Stockholm Convention on Persistent Organic Pollutants

Not listed.



### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list


<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Europe</b>	: All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (ENCS)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>Malaysia</b>	: Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	:  Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are listed or exempted.
<b>Viet Nam</b>	:  Not determined.

## Section 16. Any other relevant information

### History

<b>Date of issue/Date of revision</b>	: 16/07/2018
<b>Date of previous issue</b>	: 13/06/2016
<b>Version</b>	: 4
<b>Key to abbreviations</b>	: ADG = Australian Dangerous Goods ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) NOHSC = National Occupational Health and Safety Commission SUSMP = Standard Uniform Schedule of Medicine and Poisons UN = United Nations

### Procedure used to derive the classification

Classification	Justification
 Met. Corr. 1, H290 Skin Corr. 1, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	Expert judgment On basis of test data On basis of test data Calculation method Calculation method

**References** : Not available.

 Indicates information that has changed from previously issued version.

## Section 16. Any other relevant information

### [Notice to reader](#)

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