
SAFETY DATA SHEET

Section 1: IDENTIFICATION of CHEMICAL PRODUCT and COMPANY

Product Name:	Aminoplex Injection
Product Code:	50010 (100 mL)
Recommended Use:	A vitamin and amino acid supplement for cattle, horses, dogs and cats.
Restrictions on Use:	For animal treatment only.
Company Identification:	Jurox Pty Limited
Address:	85 Gardiner Street, Rutherford, NSW 2320, Australia
Email:	jenq@jurox.com.au
Customer Centre:	1800 023 312
National Poisons Information Centre:	13 1126 (Australia-wide)
Emergency Telephone Number:	1800 023 312 (9am – 5pm, Monday to Friday)

Section 2: HAZARDS IDENTIFICATION

Hazard Classifications: This product has been assessed according to GHS and is classified as non-hazardous.

Signal word: None

GHS Pictograms: None

Precautionary statements: None

Section 3: COMPOSITION / INFORMATION on INGREDIENTS

INGREDIENT	CAS No.	CONTENT
Nicotinamide	98-92-0	6%
L-Arginine hydrochloride	15595-35-4	2%
Dexpanthenol	81-13-0	2%
Glycine	56-40-6	2%
L-Lysine hydrochloride	657-27-2	2%
DL-Methionine	63-68-3	2%
Pyridoxine hydrochloride	58-56-0	2%
Thiamine hydrochloride	67-03-8	2%
Inositol	87-89-8	1%
Choline bitartrate	87-67-2	0.5%
Riboflavine (as sodium phosphate)	83-88-5	0.5%
Cyanocobalamin	68-19-9	0.02%
Ingredients not contributing to the hazards	-	to 100%

Section 4: FIRST AID MEASURES

General Information: Never give fluids or induce vomiting if a patient is unconscious or convulsing regardless of cause of injury. If medical advice/attention is needed, have this SDS, product container or label at hand.

Symptoms and Effects of Exposure: None known.

Inhalation: If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually not necessary. If respiratory symptoms occur, remove patient to fresh air. Lay patient down and keep warm and rested. If breathing is shallow or has stopped, ensure airway is clear and apply resuscitation. If breathing is difficult, give oxygen and seek medical assistance immediately.

Ingestion: If swallowed do NOT induce vomiting. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. 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.

Injection: Treat as for needle stick injury. Wash area well and disinfect. If other symptoms become evident, seek medical advice.

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.

Eye: If eye contact occurs: Immediately 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 for at least 20 minutes. If eye irritation persists, get medical advice/attention.

Recommended First Aid Facilities: Ready access to running water and soap is required. Accessible eyewash is required.

Advice to Doctor: Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

Flash Point: No data.

Hazardous Combustion Products: If involved in a fire, may emit noxious and irritant fumes.

Extinguishing Media: There is no restriction on the type of extinguisher which may be used. Use extinguishing media suitable for surrounding area.

Protective Equipment: Protective gloves and breathing apparatus.

HAZCHEM Code: None specified.

Section 6: ACCIDENTAL RELEASE MEASURES

Spills and Disposal: Wear gloves and appropriate protective clothing. For small spills, clean up spilled product then wipe area and put empty container in garbage. For large spills, exclude non-essential people from the area. Prevent spillage from entering drains or water courses and call emergency services.

Protective Clothing: For appropriate personal protective equipment see section 8.

Environmental Precautions: Prevent from entering drains, waterways or sewers. If spill does enter waterways contact local authority.

Section 7: HANDLING AND STORAGE

Handling: Avoid accidental self-injection. Avoid contact with skin, eyes and inhalation of vapours. Use personal protective equipment as required. Do not eat, drink or smoke while handling product. Wash hands after use.

Storage: Keep out of reach of children. Store below 30°C (room temperature). Protect from light.

Other Information: Avoid contact with incompatible substances as listed in Section 10. Always read the label before use.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

This SDS describes personal protective measures relating to long term industrial and manufacturing exposure and emergency situations, such as accidents and spills. See product label for personal protective measures during normal use of the marketed product.

Exposure Limits: No exposure limits have been assigned for this product. No exposure standards for the ingredients are available. Temporary Emergency Exposure Limits (TEELs) for the ingredients are as follows:

INGREDIENT	TEEL-1	TEEL-2	TEEL-3
Nicotinamide	2 mg/m ³	22 mg/m ³	690 mg/m ³
Glycine	2.2 mg/m ³	25 mg/m ³	1600 mg/m ³
Riboflavin	3 mg/m ³	33 mg/m ³	200 mg/m ³

Engineering Controls: No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean.

Personal Protective Equipment (PPE):

Eye protection: Protective glasses or goggles are recommended when handling bulk quantities of this product.

Skin protection: When handling bulk product, prevent skin contact by wearing chemical protective gloves e.g. PVC.

Respiratory protection: Not required for the normal use of this product.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear deep orange solution	Lower flammability limits:	Not available
Odour:	Not available	Vapour Pressure:	Not available
Odour threshold:	Not available	Vapour density:	Not available
pH:	5.0 – 6.0	Relative density:	Not available
Melting Point:	Not applicable	Specific Gravity:	Not available
Boiling Point:	Not available	Solubility in Water:	Mixes with water
Flash Point:	Not available	Partition coefficient:	Not available
Evaporation Rate:	Not available	Auto-ignition temperature:	Not available
Flammability:	Not flammable	Decomposition temperature:	Not available
Upper flammability limits:	Not available	Viscosity:	Not available

Section 10: STABILITY AND REACTIVITY

Reactivity: This product is unlikely to react or polymerise under normal storage conditions.

Stability: When stored appropriately this product should show no significant degradation within the expiry period shown on the label.

Conditions to Avoid: Extreme temperatures.

Incompatible Materials: Oxidising agents.

Hazardous Decomposition Products: No data available.

Section 11: TOXICOLOGICAL INFORMATION**Acute Toxicity:**

Ingestion: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic by the oral route.

Nicotinamide: Oral LD₅₀: 2500 mg/kg;
Dexpanthenol: Oral LD₅₀: 15,000 mg/kg (mouse);
Glycine: Oral LD₅₀: 4920 mg/kg (mouse);
Lysine hydrochloride: Oral LD₅₀: 10,000 mg/kg (rat);
Methionine: Oral LD₅₀: 36,000 mg/kg (rat);
Pyridoxine hydrochloride: Oral LD₅₀: 4000 mg/kg (rat);
Thiamine hydrochloride: Oral LD₅₀: 3710 mg/kg (rat);
Inositol: Oral LD₅₀: 10,000 mg/kg (mouse);
Riboflavine: Oral LD₅₀: 2000 mg/kg (dog);
Cyanocobalamin: Oral LD₅₀: 5000 mg/kg (mouse).

Inhalation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic by the inhalation route.

Dermal: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic by the dermal route.

Injection:

Nicotinamide: Subcutaneous LD₅₀: 1680 mg/kg (rat), Intraperitoneal LD₅₀: 2050 mg/kg (mouse);
Dexpanthenol: Intraperitoneal LD₅₀: 9000 mg/kg (mouse), Intravenous LD₅₀: 7000 mg/kg (mouse);
Glycine: Subcutaneous LD₅₀: 5060 mg/kg (mouse), Intraperitoneal LD₅₀: 4450 mg/kg (mouse),
Intravenous LD₅₀: 2370 mg/kg (mouse);
Lysine hydrochloride: Intraperitoneal LD₅₀: 4019 mg/kg (rat);
Methionine: Intraperitoneal LD₅₀: 4328 mg/kg (rat), Intraperitoneal LD₅₀: 9500 mg/kg (mouse);
Pyridoxine hydrochloride: Subcutaneous LD₅₀: 2450 mg/kg (mouse), Intramuscular LD₅₀: 500 mg/kg (cat), Intravenous LD₅₀: 464 mg/kg (rabbit);
Thiamine hydrochloride: Subcutaneous LD₅₀: 266 mg/kg (mouse), Intraperitoneal LD₅₀: 200 mg/kg (rat), Intravenous LD₅₀: 74 mg/kg (mouse);
Inositol: Intraperitoneal LD₅₀: 3000 mg/kg (rat), Intravenous LD₅₀: 750 mg/kg (rat);
Riboflavine: Subcutaneous LD₅₀: 5000 mg/kg (rat), Intraperitoneal LD₅₀: 560 mg/kg (rat), Intravenous LD₅₀: 50 mg/kg (rat);
Cyanocobalamin: Intravenous LD₅₀: 2000 mg/kg (mouse).

Skin Corrosion / Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a skin irritant. Nicotinamide, thiamine hydrochloride, pyridoxine hydrochloride and methionine are considered to be mild skin irritants.

Serious Eye Damage / Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be an eye irritant. Nicotinamide, thiamine hydrochloride, pyridoxine hydrochloride and methionine are considered to be mild eye irritants.

Respiratory or Skin Sensitisation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a skin sensitiser or respiratory sensitiser.

Germ Cell Mutagenicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be mutagenic.

Carcinogenicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be carcinogenic.

Reproductive Toxicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a reproductive toxicant.

STOT: Single exposure: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a specific target organ toxicant after single exposure.

STOT: Repeat exposure: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a specific target organ toxicant after repeat exposure. However, prolonged or repeated exposure to high doses of glycine (an NMDA agonist) may cause damage to nerve cells. Too much pyridoxine (vitamin B6) is also known to lead to nerve damage.

Aspiration hazard: No data available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be toxic to the environment.

Fish

Nicotinamide: LC₅₀ (96h): >1000 mg/L;
L-Arginine hydrochloride: LC₅₀ (96h): > 1000 mg/L;
Dexpanthenol: LC₅₀ (96h) Fish > 1000 mg/L;
Glycine: LC₅₀ (96h): Fish > 1000 mg/L;
L-Lysine hydrochloride: LC₅₀ (96h): > 103mg/L;
DL-Methionine: LC₅₀ (96h): 152 mg/L;
Pyridoxine hydrochloride LC₅₀ (96h): 221 mg/L;
Thiamine hydrochloride: LC₅₀ (96h): 49,762 mg/L;
Inositol: LC₅₀ (96h): 29,111 mg/L;
Riboflavine : LC₅₀ (96h): 42,620 mg/L.

Crustacea

Nicotinamide: EC₅₀ (384h): 289 mg/L;
L-Arginine hydrochloride: EC₅₀ (24h): >1000 mg/L, NOEC (24h): 1000 mg/L;
Dexpanthenol: EC₅₀ (504h): >100 mg/L;
Glycine EC₅₀ (48h): Crustacea > 220 mg/L, NOEC (48h): ≥ 220 mg/L;
L-Lysine hydrochloride: EC₅₀ (24h) > 106 mg/L;
Inositol: EC₅₀ (384h): 6357 mg/L.

Algae and other aquatic plants

Nicotinamide: EC₅₀ (96h): 8934 mg/L, NOEC (72h): 560 mg/mL;
L-Arginine hydrochloride: EC₅₀ (96h): 26,857 mg/L;
Dexpanthenol: EC₅₀ (72h): > 100 mg/L, NOEC (72h): 100 mg/L;
Glycine: EC₅₀ (96h): 6418 mg/L;
L-Lysine hydrochloride: EC₅₀ (96h): 8214 mg/L, NOEC (72h) 100 mg/L;
DL-Methionine: EC₅₀ (96h): 4696 mg/L;
Pyridoxine hydrochloride: EC₅₀ (96h): 15,487 mg/L;
Inositol: EC₅₀ (96h): 648 mg/L.

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
Nicotinamide	HIGH	HIGH	LOW (LogKOW = -0.37)	LOW (KOC = 51.56)
L-Arginine hydrochloride	LOW	LOW	LOW (LogKOW = -4.0041)	LOW (KOC = 20.86)
Dexpanthenol	LOW	LOW	LOW (LogKOW = -1.9222)	LOW (KOC = 10)
Glycine	LOW	LOW	LOW (LogKOW = -3.21)	HIGH (KOC = 1)
L-Lysine hydrochloride	LOW	LOW	LOW (LogKOW = -2.9881)	LOW (KOC = 12.96)
DL-Methionine	LOW	LOW	LOW (LogKOW = -1.87)	LOW (KOC = 9.356)
Pyridoxine hydrochloride	LOW	LOW	LOW (LogKOW = -0.557)	LOW (KOC = 10)
Thiamine hydrochloride	HIGH	HIGH	LOW (LogKOW = -1.7773)	LOW (KOC = 87.51)
Inositol	LOW	LOW	LOW (LogKOW = -2.0814)	LOW (KOC = 10)
Choline bitartrate	No data	No data	No data	No data
Riboflavine (as sodium phosphate)	HIGH	HIGH	LOW (LogKOW = -1.46)	LOW (KOC = 325.8)
Cyanocobalamin	HIGH	HIGH	LOW (LogKOW = -12.1962)	LOW (KOC = 10000000000)

Section 13: DISPOSAL INFORMATION

Product Disposal: Dispose of product only by using according to label or at an approved landfill.

Container Disposal: Crush or puncture and bury in an approved landfill if an approved recycling system is not available.

Section 14: TRANSPORT INFORMATION

Dangerous Goods Classification: Not considered a Dangerous Good for land, sea and air transport.

Section 15: REGULATORY INFORMATION

Poison Schedule (SUSMP): None.

APVMA No.: 46907

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

Section 16: OTHER INFORMATION

This information is based on data believed by Jurox Pty Limited to be accurate at the time of writing but is subject to change without notice. It is given in good faith, but no warranty expressed or implied is made as to its accuracy, completeness otherwise and no assumption of liability from howsoever arising is made by Jurox Pty Limited by reason of the provision of this information. Every person dealing with the materials referred to herein does so at his/her own risk absolutely and must make independent determinations of suitability and completeness of information from all sources to ensure their proper use.

Legend:

AICS	Australian Inventory of Chemical Substances.
CAS No.	Chemical Abstracts Service Registry Number.
EC₅₀	The median effect concentration, being a statistically derived concentration of a substance that can be expected to cause an adverse reaction in 50% of organisms or a 50% reduction in growth or in the growth rate of organisms.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals.
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters.
KOC	Soil-Water Partition Coefficient. The ratio of a chemical's concentration that is adsorbed in the soil to the concentration of chemical in solution.
KOW	Octanol Water Partition Coefficient. The ratio of a compound's concentration in a known volume of n-octanol to its concentration in a known volume of water after the octanol and water have reached equilibrium.
LC₅₀	The median lethal concentration, being a statistically derived concentration of a substance that can be expected to cause death in 50% of animals.
LD₅₀	The median lethal dose, being a statistically derived single dose of a substance that can be expected to cause death in 50% of animals.
NICNAS	National Industrial Chemicals Notification and Assessment Scheme.
NOEC	No-observable-effect-concentration.
PPE	Personal Protective Equipment.
PVC	Polyvinyl chloride.
SDS	Safety Data Sheet.
STOT	Specific Target Organ Toxicity.
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons.
SWA	Safe Work Australia.
TEELs	Temporary Emergency Exposure Limits. Guidelines designed to predict the response of members of the general public to different concentrations of a chemical during an emergency response incident.
TEEL-1	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic, nonsensory effects. However, these effects are not disabling and are transient and reversible upon cessation of exposure.
TEEL-2	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting, adverse health effects or an impaired ability to escape.
TEEL-3	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening adverse health effects or death.

References:

ChemID Plus

EPA New Zealand Chemical Classification and Information Database (CCID)

HSDB (Hazardous Substances Data Bank)

This version issued: 15 February 2016 and is valid for 5 years from this date.

Supersedes: This SDS supercedes the version issued on 1 July 2011.

Revision History:

Date of Revision	Reason
15 February 2016	GHS classification and update of SDS to comply with SWA Code of Practice.

END OF SDS