

1. IDENTIFICATION

Product Name	Sodium nitrite
Other Names	Nitrous acid, sodium salt
Uses	No Data Available
Chemical Family	No Data Available
Chemical Formula	NaNO ₂
Chemical Name	Sodium nitrite
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Schedule 7

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories Acute Toxicity (Oral) - Category 3
Acute Hazard To The Aquatic Environment - Category 1
Serious Eye Damage/Irritation - Category 2A
Oxidising Solids - Category 2

Pictograms



Signal Word Danger

Hazard Statements

H272 May intensify fire; oxidizer.
H301 Toxic if swallowed.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.

Precautionary Statements

Prevention	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.	
	P221	Take any precaution to avoid mixing with combustibles.	
	P270	Do not eat, drink or smoke when using this product.	
	P273	Avoid release to the environment.	
	P280	Wear protective gloves/eye protection/face protection.	
	Response	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P321	Specific treatment (see supplemental first aid instructions on this label).
		P330	Rinse mouth.
		P337 + P313	If eye irritation persists: Get medical advice/attention.
Storage	P370 + P378	In case of fire: Use water for extinction.	
	P391	Collect spillage.	
	P405	Store locked up.	
Disposal	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.	

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications

Physical Hazards	5.1.1C	Oxidising substances that are liquids or solids: low hazard
Health Hazards	6.1C	Substances that are acutely toxic- Toxic
	6.4A	Substances that are irritating to the eye
	6.6B	Substances that are suspected human mutagens
	6.9B	Substances that are harmful to human target organs or systems

Environmental Hazards	9.1A	Substances that are very ecotoxic in the aquatic environment
	9.1D	Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action
	9.3B	Substances that are ecotoxic to terrestrial vertebrates

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Sodium Nitrite	No Data Available	7632-00-0	>=98 %
May contain anti-caking agent	Unspecified	Unspecified	No Data Available

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	Rinse mouth immediately and then drink plenty of water, induce vomiting, seek medical attention.
Eye	Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention from an eye specialist.
Skin	Remove contaminated clothing. Wash affected area with plenty of Soap and water for at least 15 minutes. Seek medical attention if symptoms develop or persist. Wash clothing before reuse.
Inhaled	After inhalation of decomposition products, remove the affected person to a source of fresh air and keep calm. Provide medical aid. Immediately administer a corticosteroid from a controlled/metered dose inhaler.
Advice to Doctor	Symptoms: Overexposure may cause: vomiting, convulsions, cyanosis, death, coma, methaemoglobinaemia, nausea Hazards: Risk of pulmonary edema. Symptoms can appear later. Danger of methaemoglobin formation after ingestion. Treatment: Treat according to symptoms (decontamination, vital functions), treat with toluonium chloride to reverse methaemoglobinanaemia.
Medical Conditions Aggravated by Exposure	No Data Available

5. FIRE FIGHTING MEASURES

General Measures	Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk.
Flammability Conditions	Powerful oxidising agent. Not combustible, but will support the combustion of other material.
Extinguishing Media	Water spray. DO NOT USE: ABC powder, carbon dioxide.
Fire and Explosion Hazard	Protection against fire and explosion: The substance/product is non-combustible. Has a fire-promoting effect due to release of oxygen. Where required Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.
Hazardous Products of Combustion	Nitrogen oxides. The substances/groups of substances mentioned can be released in case of fire. Has a firepromoting effect due to release of oxygen.
Special Fire Fighting Instructions	HAZCHEM: 1Z Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment. Dam fire control water for later disposal.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available

Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	1Z

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Avoid accidents, clean up immediately. Slippery when spilled. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Use clean, non-sparking tools and equipment. Do NOT contaminate. Keep combustibles away from spilled material.
Clean Up Procedures	Contain and sweep/shovel up spills with dust binding material. Transfer to a suitable, labelled container and dispose of promptly as hazardous waste.
Containment	Stop leak if safe to do so. Isolate the danger area.
Environmental Precautionary Measures	Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Do not discharge into the subsoil/soil.
Evacuation Criteria	Evacuate all unnecessary personnel.
Personal Precautionary Measures	Do NOT touch damaged containers or spilled material unless wearing appropriate protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product vapours. Avoid prolonged or repeated exposure. Keep container tightly sealed. Breathing must be protected when large quantities are decanted without local exhaust ventilation. Processing machines must be fitted with local exhaust ventilation. Protect against moisture. Protect against heat. Do not mix with combustible substances. Protection against fire and explosion: The substance/product is non-combustible. Has a fire-promoting effect due to release of oxygen. Sources of ignition should be kept well clear - fire extinguishers should be kept handy.
Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Segregate from oxidizable substances. Segregate from acids. Segregate from ammonium salts. This product is classified as a dangerous substance for storage. The authority permits and storage regulations must be observed. Keep away from food, drink and animal feeding stuffs. This product has a UN classification of 1500 and a Dangerous Goods Class 5.1 (Oxidiser) with a subsidiary risk 6.1 (Toxic) according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.
Container	Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, the exposure standard for dust not otherwise specified is 10mg/m ³ (for inspirable dust) and 3mg/m ³ (for respirable dust).
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Adequate ventilation should be provided so that exposure limits are not exceeded.
Personal Protection Equipment	RESPIRATOR: Particle filter with high efficiency for solid and liquid particles (e.g. Type P3 or FFP3) (AS1715/1716). EYES: Safety glasses with side-shields (frame goggles) (AS1336/1337). HANDS: Gloves made of : polyvinylchloride (PVC) - 0.7 mm coating thickness; nitrile rubber (NBR) - 0.4 mm coating thickness; chloroprene rubber (CR) - 0.5 mm coating thickness; butyl rubber (butyl) - 0.7 mm coating thickness; fluoroelastomer (FKM) - 0.7 mm coating thickness; with >480min permeation time (AS2161). CLOTHING: Chemical-resistant coveralls and safety footwear (AS3765/2210).

Work Hygienic Practices

Keep away from food, drink and animal feeding stuffs. No eating, drinking, smoking or tobacco use at the place of work. Take off immediately all contaminated clothing. Hands and/or face should be washed before breaks and at the end of the shift.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline
Odour	Faint odour
Colour	White to slightly yellow
pH	8 - 9 100 g/L @ 20 deg C
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	Decomposes
Melting Point	280 °C
Freezing Point	No Data Available
Solubility	Readily soluble, formation of sediments in water
Specific Gravity	2.17
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	1,100 - 1,300 kg/m ³
Corrosion Rate	No Data Available
Decomposition Temperature	>320 °C
Density	2.17 g/cm ³ [ISO 2811-3]
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	Hygroscoy: hygroscopic
Potential for Dust Explosion	No Data Available
Fast or Intensely Burning Characteristics	Strong oxidiser - Product will accelerate burning when involved in a fire.
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available
Reactions That Release Gases or Vapours	No Data Available
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

General Information	Powerful oxidising agent.
Chemical Stability	No Data Available
Conditions to Avoid	No Data Available
Materials to Avoid	Reducing agents, oxidizable substances, ammonium salts, amines, amine compounds, acids
Hazardous Decomposition Products	Nitrogen monoxide, nitrogen dioxide, disodium oxide.
Hazardous Polymerisation	No Data Available

11. TOXICOLOGICAL INFORMATION

General Information	<p>Assessment of acute toxicity: Of high toxicity after single ingestion. There is a risk of damage to the blood (methemoglobinemia) after a single uptake.</p> <p>LD50 rat (oral): 180 mg/kg</p> <p>Irritation Assessment of irritating effects: Not irritating to the skin. Eye contact causes irritation. Primary skin irritation rabbit: non-irritant (OECD Guideline 404) Primary irritations of the mucous membrane rabbit: Irritant. (OECD Guideline 405)</p> <p>Sensitization Assessment of sensitization: There is no evidence of a skin-sensitizing potential. Study scientifically not justified.</p> <p>Repeated dose toxicity Assessment of repeated dose toxicity: After repeated administration the prominent effect is damage of the blood (methemoglobin formation).</p> <p>Genetic toxicity Information on: sodium nitrite Assessment of mutagenicity: The data available on mutagenic action are not consistent.</p> <p>Carcinogenicity Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by drinking-water, a carcinogenic effect was not observed. Under certain conditions nitrites can enhance the formation of nitrosamines in vivo. Nitrosamines are carcinogenic in animal studies.</p> <p>Reproductive toxicity Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.</p> <p>Developmental toxicity Assessment of teratogenicity: In animal studies the substance did not cause malformations. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals. After the uptake of small doses toxicity to development will not be expected in humans.</p>
Eye/Irritant	May cause eye irritation.
Ingestion	Toxic if swallowed
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	<p>Assessment of aquatic toxicity: Very toxic (acute effect) to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.</p> <p>Toxicity to fish: LC50 (96 h) 0.54 - 26.3 mg/l, <i>Salmo gairdneri</i>, syn. <i>O. mykiss</i> (Flow through.)</p>
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Aquatic invertebrates:
LC50 (96 h) 4.93 mg/l, aquatic crustacea (static) Literature data.
EC50 (48 h) 15.4 mg/l, Daphnia magna (OECD Guideline 202, part 1, static) The statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants:
EC50 (72 h) > 100 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static) The statement of the toxic effect relates to the analytically determined concentration.

Microorganisms/Effect on activated sludge:
EC10 (3 h) 210 mg/l, activated sludge, domestic (OECD Guideline 209, static) The details of the toxic effect relate to the nominal concentration.
EC50 (48 h) 421 mg/l, protozoa (other, static)

Chronic toxicity to fish: No observed effect concentration (31 d) 6.16 mg/l, Ictalurus punctatus, syn: I. robustus (Flow through.)

Chronic toxicity to aquatic invertebrates: No observed effect concentration (80 d), 9.86 mg/l, aquatic crustacea (Daphnia test chronic, static)

Assessment of terrestrial toxicity: Study scientifically not justified.

Persistence/Degradability

Assessment biodegradation and elimination (H₂O): Inorganic product which cannot be eliminated from water by biological purification processes. Can be oxidized to nitrate, or be reduced to nitrogen, by microorganisms.

Assessment of stability in water: Study technically not feasible.

Mobility

Assessment transport between environmental compartments: Adsorption to solid soil phase is not expected.

Environmental Fate

Do not allow to enter soil, waterways or waste water channels. Do not release untreated into natural waters. Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

Bioaccumulation Potential

Assessment bioaccumulation potential: Accumulation in organisms is not to be expected.

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS

General Information

Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.

Special Precautions for Land Fill

Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	SODIUM NITRITE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
EPG	31 Oxidizing Substances
UN Number	1500
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available

Land Transport (Malaysia)

ADR

Proper Shipping Name	SODIUM NITRITE
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Class	5.1 Oxidising Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
EPG	31 Oxidizing Substances
UN Number	1500
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	SODIUM NITRITE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
EPG	31 Oxidizing Substances
UN Number	1500
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	SODIUM NITRITE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
ERG	140 Oxidizers
UN Number	1500
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	SODIUM NITRITE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
UN Number	1500
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available
EMS	FA,SQ
Marine Pollutant	Yes

Air Transport

IATA DGR

Proper Shipping Name	SODIUM NITRITE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
UN Number	1500
Hazchem	1Z
Pack Group	III

Special Provision

No Data Available

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION**General Information**

No Data Available

Poisons Schedule (Aust)

Schedule 7

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code

HSR001286

National/Regional Inventories**Australia (AICS)**

Listed

Canada (DSL)

Not Determined

Canada (NDSL)

Not Determined

China (IECSC)

Not Determined

Europe (EINECS)

Not Determined

Europe (REACH)

Not Determined

Japan (ENCS/METI)

Not Determined

Korea (KECI)

Not Determined

Malaysia (EHS Register)

Not Determined

New Zealand (NZIoC)

Listed

Philippines (PICCS)

Not Determined

Switzerland (Giftliste 1)

Not Determined

Switzerland (Inventory of Notified Substances)

Not Determined

Taiwan (NCSR)

Not Determined

USA (TSCA)

Not Determined

16. OTHER INFORMATION

SONITF1000, SONITF1001, SONITF1002, SONITF2100, SONITF2500, SONITF2600, SONITF2602, SONITF2605,

Related Product Codes	SONITF2606, SONITF2630, SONITF2631, SONITF3000, SONITF3001, SONITF3002, SONITF3010, SONITF3020, SONITF3021, SONITF3022, SONITF3023, SONITF3024, SONITF3100, SONITF3101, SONITF3200, SONITF3300, SONITF3500, SONITR1000, SONITR1001, SONITR1002, SONITR1003, SONITR1004, SONITR1005, SONITR1500, SONITR1700, SONITR1800, SONITR1801, SONITR1802, SONITR1803, SONITR1804, SONITR1805, SONITR1806, SONITR1807, SONITR2000, SONITR2001, SONITR2002, SONITR2003, SONITR2004, SONITR2005, SONITR2010, SONITR2011, SONITR2020, SONITR2048, SONITR2100, SONITR2500, SONITR3000, SONITR3001, SONITR3100, SONITR3500, SONITR4000, SONITR4001, SONITR4002, SONITR4003, SONITR4004, SONITR4005, SONITR5000, SONITR5300, SONITR5800, SONITR5801, SONITR5802, SONITR5803, SONITR5804, SONITR5805, SONITR5806, SONITR5807, SONITR5808, SONITR5809, SONITR5810, SONITR5811, SONITR5812, SONITR6000, SONITR6001, SONITR6002, SONITR6003, SONITR6004, SONITR6005, SONITR6006, SONITR6007, SONITR6008, SONITR6009, SONITR6010, SONITR6011, SONITR6012, SONITR6013, SONITR6014, SONITR6015, SONITR6016, SONITR6017, SONITR6018, SONITR6019, SONITR6020, SONITR6021, SONITR6022, SONITR6023, SONITR6024, SONITR6025, SONITR6026, SONITR6027, SONITR6028, SONITR6029, SONITR6030, SONITR6031, SONITR6100, SONITR6101, SONITR6102, SONITR6103, SONITR6104, SONITR7000, SONITR7001, SONITR7500, SONITR8000, SONITR8500, SONITR8501, SONITR9000, SONITR9100, SONITR9200, SONITR9300, SONITR9600, SONITR9825, SONITR9850
Revision	3
Revision Date	21 Feb 2016
Reason for Issue	updated sds
Key/Legend	<p>< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² Square Centimetres CO₂ Carbon Dioxide COD Chemical Oxygen Demand deg C (°C) Degrees Celcius EPA (New Zealand) Environmental Protection Authority of New Zealand deg F (°F) Degrees Farenheit g Grams g/cm³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health immiscible Liquids are insoluable in each other. inHg Inch of Mercury inH₂O Inch of Water K Kelvin kg Kilogram kg/m³ Kilograms per Cubic Metre lb Pound LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. ltr or L Litre m³ Cubic Metre mbar Millibar mg Milligram mg/24H Milligrams per 24 Hours mg/kg Milligrams per Kilogram mg/m³ Milligrams per Cubic Metre Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present. mm Millimetre mmH₂O Millimetres of Water mPa.s Millipascals per Second N/A Not Applicable NIOSH National Institute for Occupational Safety and Health NOHSC National Occupational Health and Safety Commission OECD Organisation for Economic Co-operation and Development Oz Ounce PEL Permissible Exposure Limit Pa Pascal ppb Parts per Billion ppm Parts per Million ppm/2h Parts per Million per 2 Hours ppm/6h Parts per Million per 6 Hours psi Pounds per Square Inch R Rankine RCP Reciprocal Calculation Procedure STEL Short Term Exposure Limit TLV Threshold Limit Value</p>

tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight