

MATERIAL SAFETY DATA SHEET

AQUASONIC NET-SAN

DATE OF ISSUE: 20 November 2013

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name: Netsan
Company Name: Aquasonic Pty Ltd
Company Address: 14 Commerce St
Wauchope NSW 2446
Phone/Fax: Ph: 02 6586 4933 Fax: 02 6586 4944
Recommended Use: Reagents for detection of bromates and halogens, synthesis of organic products, analysis and medicine (antiseptic)
Other Names: Sodium p-toluenesulfochloramine
Sodium toluene-p-sulfonchloroamine
Tosylchloramide Sodium
Chlorine bleaching solution
N-Chloro-4-toluenesulfonamide sodium salt
N-Chloro-4-methylbenzenesulfonamide sodium salt
Other Information: Poisons Information Centre Ph: 131 126

HAZARDS IDENTIFICATION

Hazard Classification: HAZARDOUS SUBSTANCE
DANGEROUS GOODS
Hazard Classification according to the criteria of NOHSC
Dangerous goods classification according to the Australian Dangerous Goods Code
Risk Phrase(s): R22 Harmful if swallowed
R31 Contact with acids liberates toxic gas
R34 Causes burns
R42 May cause sensitization by inhalation
Safety Phrase(s): S22 Do not breathe dust
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
S45 In case of accident, or if you feel unwell, seek medical advice immediately
S7 Keep container tightly closed
Signs and Symptoms of exposure: Absorption into body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Repeated exposure may cause asthma.

COMPOSITION/INFORMATION ON INGREDIENTS

Chemical

Characterisation: Solid

FIRST AID MEASURES

Inhalation: Remove victim to fresh air. Seek medical advice if effects persist
Ingestion: Rinse mouth thoroughly with water immediately. Give water to drink. DO NOT induce vomiting. Seek medical attention.
Skin: Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before reuse. Seek medical attention.
Eye: Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical attention.
First Aid Facilities: Maintain eyewash fountain and drench facilities in work area.
Advice to Doctor: Consult Poisons Information Centre

FIRE FIGHTING METHODS

Specific Methods: Small fire: Use dry chemical, CO₂ or water spray. If safe to do so, move undamaged containers from fire area.
Large Fire: Use dry chemical, CO₂, foam or water spray – Do not use water jets. Cool containers with flooding quantities of water until well after the fire is out. Avoid getting water inside the containers.
Specific Hazards: May burn but do not ignite readily. Containers may explode when heated. When heated, vapours may form explosive mixtures with air. Contact with metals may evolve flammable hydrogen gas. Runoff may pollute waterways. May be transported in a molten form. Fire will produce irritating, poisonous and/or corrosive gases.
Hazchem Code: 2X
Decomposition Temp: 60°C
Precautions in connection with fire: Wear SCBA and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials.
Other Information: Contain escaping vapours with water.

ACCIDENTAL RELEASE MEASURES

Spills and Disposal: ELIMINATE all ignition sources (no smoking, flares, sparks or flames) within at least 15 meters. Do not touch or walk through spilled material unless wearing appropriate protective clothing. Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Cover with plastic sheet to prevent spreading. Absorb with earth, sand or other non-combustible material and transfer to container.
DO NOT GET WATER INSIDE CONTAINERS.
SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

HANDLING AND STORAGE

Precautions for

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safe handling:	Avoid substance contact and generation and inhalation of dust. Work under hood.
Conditions for Safe Storage:	Store away from heat. Store away from oxidising agents. Store away from acids. Keep containers securely sealed and protected against physical damage. Keep container dry. Store at room temperature (15-25°C).

EXPOSURE CONTROLS/PERSONAL PROTECTION

Other exposure Information:	A Time Weighted Average (TWA) concentration for and 8 hour day, and a five day week has been established by NOHSC Australia for this product. There is a blanket limit of 10mg/m ³ for dusts when limits have not otherwise been established.
Engineering Controls:	In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Respiratory Protection:	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 – Respiratory Protective Devices and be selected in accordance with AS 1715 – Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
Eye Protection:	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
Hand Protection:	Hand protection should comply with AS 2161, Occupational protective gloves – Selection, use and maintenance. Recommendation: Nitrile Rubber Gloves.
Body Protection:	Flame retardant protective clothing. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures:	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

PHYSICAL AND CHEMICAL PROPERTIES

Form:	Solid
Appearance:	White or slightly yellow crystals or powder
Odour:	Slight odour of chlorine
Decomposition Temp:	60°C
Melting Point:	167-170°C (Anhydrous Substance)
Solubility in water:	Soluble, 150g/L (25°C)
Solubility in Organic Solvents:	Insoluble in benzene, chloroform and ether. Decomposed by alcohol.
pH value:	~8-10 (50g/L, H ₂ O, 20°C)
Octanol/Water Partition Coefficient:	log P (o/w): 0.84 (Calculated)
Flash Point:	192°C (C.C.)
Flammability:	Combustible

Molecular Weight: 281.69
Other information: Contains 11.5-13% active chlorine

STABILITY AND REACTIVITY

Chemical Stability: Decomposes slowly in air, liberating chlorine
Conditions to avoid: Heating (explosive decomposition if heated above 130°C), air
Incompatible materials: Strong Oxidisers (violent reactions possible), ammonia and acids.
Hazardous
Decomposition
Products: Oxides of carbon, nitrogen and sulphur and hydrogen chloride gas
Hazardous Reactions: May decompose violently if heated. Contact with acids liberates toxic gas
Hazardous
Polymerisation: Will not occur

TOXICOLOGICAL INFORMATION

Inhalation: May cause sensitisation by inhalation. Irritating to mucous membranes and upper respiratory tract. May cause coughing and dyspnoea.
Ingestion: Harmful if swallowed. Causes burns in mouth, throat, oesophagus and gastrointestinal tract. Risk of perforation in the oesophagus and stomach.
Skin: Causes burns
Eye: Causes burns
Acute Toxicity – Oral: LD50 (rat): ~100mg/kg
Acute Toxicity –
Inhalation: LC50 (rat): >0.275mg/ ¼ hr

ECOLOGICAL INFORMATION

Persistence/ Biodegradation: 90%/28d
Degradability: Readily biodegradable
Bioaccumulative Behaviour in environmental compartments:
Potential: log P (o/w): 0.84 (calculated)
No bioaccumulation is to be expected (log P (o/w)<1)
Biological Properties: Disinfectant effect
Environ. Protection: Do not allow to enter waters, waste water or soil!
Acute toxicity – Fish: P. reticulata LC50: 31mg/ 1/96 hr

DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of according to relevant local, state and federal government regulations.

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TRANSPORT INFORMATION

U.N. Number: 3263
Proper Shipping Name: Corrosive solid, Basic, Organic, N.O.S.
DG Class: 8
Hazchem Code: 2X
Packaging Method: 3.8.8
Packing Group: III
IERG Number: 36

REGULATORY INFORMATION

Poisons Schedule: S5
Hazard Category: Harmful, Corrosive