

W5C WATER CONDITIONER FOR MAGNETIC PARTICLES

Chemwatch Independent Material Safety Data Sheet

Issue Date: 19-Mar-2013

A317LP

CHEMWATCH 4868-76

Version No:2.1.1.1

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

W5C WATER CONDITIONER FOR MAGNETIC PARTICLES

PRODUCT USE

Used in magnetic particle inspection.

SUPPLIER

Company: Callington Haven Pty Ltd

Address:

30 South Street

Rydalmere

NSW, 2116

Australia

Telephone: +61 2 9898 2788

Emergency Tel: **1800 039 008 (24 hours)**

Emergency Tel: **+61 3 9573 3112**

Fax: +61 2 9684 4215

Email: sales@calhaven.com.au

Company: Callington Haven Pty Ltd

Address:

PO Box 144

Rydalmere

NSW, 2116

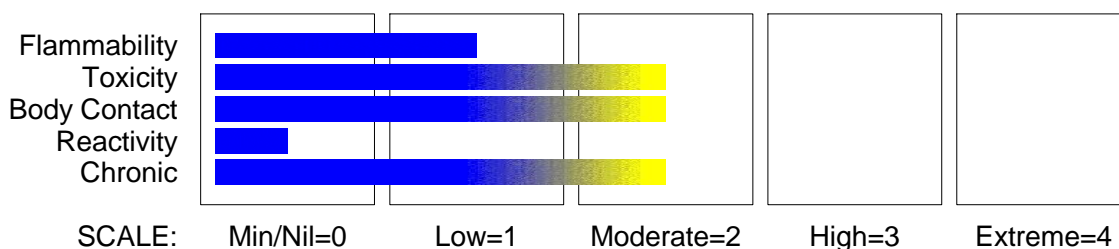
Australia

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

CHEMWATCH HAZARD RATINGS



RISK

Risk Codes

R22

Risk Phrases

• Harmful if swallowed.

SAFETY

Safety Codes

S22

S24

S36

S37

S40

S13

S46

Safety Phrases

• Do not breathe dust.

• Avoid contact with skin.

• Wear suitable protective clothing.

• Wear suitable gloves.

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

• Keep away from food, drink and animal feeding stuffs.

• If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

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Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
sodium nitrite	7632-00-0	3
sodium tripolyphosphate	7758-29-4	Not Spec
nonylphenol, ethoxylated	9016-45-9	Not Spec

Section 4 - FIRST AID MEASURES

SWALLOWED

- For advice, contact a Poisons Information Centre or a doctor.
- 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 unconscious
- 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:
- Wash out immediately with fresh 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.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If skin or hair contact occurs:
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

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

- The toxicity of nitrates and nitrites result from their vasodilating properties and their propensity to form methaemoglobin.
- Most produce a peak effect within 30 minutes.
- Clinical signs of cyanosis appear before other symptoms because of the dark pigmentation of methaemoglobin.
- Initial attention should be directed towards improving oxygen delivery, with assisted ventilation, if necessary. Hyperbaric oxygen has not demonstrated conclusive benefits.
- Institute cardiac monitoring, especially in patients with coronary artery or pulmonary disease.
- Hypotension should respond to Trendelenburg's position and intravenous fluids; otherwise dopamine may be needed.
- Naloxone, glucose and thiamine should be given if a multiple ingestion is suspected.
- Decontaminate using Ipecac Syrup for alert patients or lavage for obtunded patients who present within 2-4 hours of ingestion.
- Symptomatic patients with methaemoglobin levels over 30% should receive methylene blue. (Cyanosis alone, is not an indication for treatment). The usual dose is 1-2 mg/kg of a 1% solution (10 mg/ml) IV over 5 minutes; repeat, using the same dose if symptoms of hypoxia fail to subside within 1 hour.

[Ellenhorn and Barceloux: Medical Toxicology]

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker who has been exposed

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Section 4 - FIRST AID MEASURES

at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
1. Methaemoglobin in blood	1.5% of haemoglobin	During or end of shift	B, NS, SQ

B: Background levels occur in specimens collected from subjects NOT exposed

NS: Non-specific determinant; also observed after exposure to other materials

SQ: Semi-quantitative determinant - Interpretation may be ambiguous; should be used as a screening test or confirmatory test.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use water delivered as a fine spray to control fire and cool adjacent 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

- Combustible.

Decomposes on heating and produces toxic fumes of: carbon monoxide (CO), carbon dioxide (CO₂), phosphorus oxides (PO_x), nitrogen oxides (NO_x).

Avoid creating dust - may present dust explosion hazard. Dry dust can be electrostatically charged by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport. Build-up of electrostatic charge may be prevented by grounding.

FIRE INCOMPATIBILITY

- Avoid contamination with strong oxidising agents as ignition may result.

HAZCHEM

None

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Use dry clean up procedures and avoid generating dust.
- Place in a suitable, labelled container for waste disposal.

MAJOR SPILLS

- Remove all ignition sources.
- Clear area of personnel and move upwind.

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Section 6 - ACCIDENTAL RELEASE MEASURES

- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact with the substance, by using protective equipment and dust respirator.
- Prevent spillage from entering drains, sewers or water courses.
- Recover product wherever possible. Avoid generating dust.
- Sweep / shovel up.
- If required, wet with water to prevent dusting.
- Put residues in labelled plastic bags or other containers for disposal.
- Wash area down with large quantity of water and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Remove all ignition sources.
- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- When handling DO NOT eat, drink or smoke.
- Always wash hands with soap and water after handling.
- Avoid physical damage to containers.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this MSDS.

SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- Avoid storage with oxidisers.

STORAGE REQUIREMENTS

- Keep dry.
 - Store under cover.
 - Store in a well ventilated area.
 - Store away from sources of heat or ignition.
 - Observe manufacturer's storage and handling recommendations contained within this MSDS.
-

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- sodium nitrite: CAS:7632- 00- 0
- sodium tripolyphosphate: CAS:7758- 29- 4 CAS:15091- 98- 2
- nonylphenol, ethoxylated: CAS:9016- 45- 9 CAS:26027- 38- 3 CAS:26571- 11- 9

MATERIAL DATA

NONYLPHENOL, ETHOXYLATED:

SODIUM NITRITE:

SODIUM TRIPOLYPHOSPHATE:

■ Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

SODIUM NITRITE:

SODIUM TRIPOLYPHOSPHATE:

■ It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

W5C WATER CONDITIONER FOR MAGNETIC PARTICLES:

Not available

PERSONAL PROTECTION



EYE

- Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

HANDS/FEET

- Wear protective gloves, e.g. PVC.

OTHER

- Overalls.
- Eyewash unit.

RESPIRATOR

- Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

- Use in a well-ventilated area.
- If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

White powder with little or no odour; soluble in water.

PHYSICAL PROPERTIES

Solid.

Mixes with water.

State	Divided solid	Molecular Weight	Not applicable
Melting Range (°C)	Not available	Viscosity	Not Applicable
Boiling Range (°C)	Not Available	Solubility in water (g/L)	Miscible
Flash Point (°C)	Not applicable	pH (1% solution)	Not available
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not applicable
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Not applicable
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	Not available
Lower Explosive Limit (%)	Not Available	Relative Vapour Density (air=1)	Not available.
Volatile Component (%vol)	Not applicable.	Evaporation Rate	Not applicable

Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

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Section 11 - TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

SWALLOWED

■ Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Ingestion may result in nausea, abdominal irritation, pain and vomiting. Sodium nitrite ingestion may cause dilation of blood vessels by direct smooth muscle relaxation and may also cause methaemoglobinaemia. Symptoms of mild poisoning include dizziness, headache, vomiting, shortness of breath and blueness of the lips and skin (cyanosis).

EYE

■ There is some evidence to suggest that this material can cause eye irritation and damage in some persons.

SKIN

■ There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.

INHALED

■ Generated dust may be discomforting.

CHRONIC HEALTH EFFECTS

■ Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray. There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

TOXICITY AND IRRITATION

■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

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■ Not available. Refer to individual constituents.

SODIUM NITRITE:

TOXICITY

Oral (human) LDLo:71 mg/kg

Oral (human) TDLo:14 mg/kg

Oral (man) TDLo:1.71 mg/kg/70m

Oral (rat) LD50:180 mg/kg

Inhalation (rat) LC50:5.5 mg/m³/4h

■ The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Tumorigenic - Carcinogenic by RTECS criteria.

IRRITATION

Eye (rabbit):500 mg/24hr - Mild

SODIUM TRIPOLYPHOSPHATE:

TOXICITY

Oral (Rat) LD50:5190 mg/kg

Dermal (Rabbit) LD50:>3160 mg/kg *

■ Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to

IRRITATION

Nil Reported

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Section 11 - TOXICOLOGICAL INFORMATION

the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

NONYLPHENOL, ETHOXYLATED:

TOXICITY

Oral (rat) LD50:>2000 mg/kg

Dermal (rabbit) LD50:2830 ul/kg

IRRITATION

Skin (human):15 mg/3D Mild

Skin (rabbit):500 mg Mild

Eye (rabbit):5 mg SEVERE

■ Human beings have regular contact with alcohol ethoxylates through a variety of industrial and consumer products such as soaps, detergents, and other cleaning products . Exposure to these chemicals can occur through ingestion, inhalation, or contact with the skin or eyes. Studies of acute toxicity show that volumes well above a reasonable intake level would have to occur to produce any toxic response. Moreover, no fatal case of poisoning with alcohol ethoxylates has ever been reported. Multiple studies investigating the acute toxicity of alcohol ethoxylates have shown that the use of these compounds is of low concern in terms of oral and dermal toxicity .

Clinical animal studies indicate these chemicals may produce gastrointestinal irritation such as ulcerations of the stomach, pilo-erection, diarrhea, and lethargy. Similarly, slight to severe irritation of the skin or eye was generated when undiluted alcohol ethoxylates were applied to the skin and eyes of rabbits and rats. The chemical shows no indication of being a genotoxin, carcinogen, or mutagen (HERA 2007). No information was available on levels at which these effects might occur, though toxicity is thought to be substantially lower than that of nonylphenol ethoxylates.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

Both laboratory and animal testing has shown that there is no evidence for alcohol ethoxylates (AEs) causing genetic damage, mutations or cancer. No adverse reproductive or developmental effects were observed. Animal testing showed that at levels of greater than 100mg/kg, effects were limited to changes in organ weights, with no pathological changes except for liver hypertrophy. AEs are not contact sensitisers. Neat AE are irritating to eyes and skin. The irritation potential of aqueous solutions of AEs depends on concentration. Spray cleaner aerosols and laundry powder detergent dust discharge so little airborne AE that there is unlikely to be irritation of the respiratory tract. In summary, the human health risk assessment has demonstrated that the use of AE in household laundry and cleaning detergents is safe and does not cause concern with regard to consumer use.

CARCINOGEN

sodium nitrite	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	2A	Probably carcinogenic to humans
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SKIN

sodium nitrite	GESAMP/EHS Composite List - GESAMP Hazard Profiles	D1: skin irritation/corrosion	0
sodium tripolyphosphate	GESAMP/EHS Composite List - GESAMP Hazard Profiles	D1: skin irritation/corrosion	NI
nonylphenol, ethoxylated	GESAMP/EHS Composite List - GESAMP Hazard Profiles	D1: skin irritation/corrosion	2

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Section 12 - ECOLOGICAL INFORMATION

SODIUM TRIPOLYPHOSPHATE:

NONYLPHENOL, ETHOXYLATED:

SODIUM NITRITE:

■ DO NOT discharge into sewer or waterways.

■ Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

NONYLPHENOL, ETHOXYLATED:

SODIUM TRIPOLYPHOSPHATE:

■ May cause long-term adverse effects in the aquatic environment.

SODIUM NITRITE:

Marine Pollutant

Yes

■ Very toxic to aquatic organisms.

For Nitrate/Nitrite

Environmental Fate: Nitrates form from nitrate or ammonium ions by micro-organisms in soil, water, sewage and the digestive tract. The concern with nitrate in the environment is related to its conversion to nitrite.

Primary sources of organic nitrates include human sewage and livestock manure, especially from feedlots.

Atmospheric Fate: Nitrate/nitrites do not evaporate into the air; however, any nitrites released into the air slowly oxidize to nitrates.

Terrestrial Fate: Due to its high solubility and weak retention by soil, nitrates/nitrites are very mobile in soil, moving at approximately the same rate as water, and have a high potential to migrate to ground water. The substances can contaminate groundwater to unacceptable levels.

Aquatic Fate: Nitrate/nitrites do not evaporate from water surfaces. The substances are expected to remain in water until consumed by plants or other organisms. Ammonium nitrate will be taken up by bacteria. Nitrate is more persistent in water than the ammonium ion. Nitrate degradation is fastest under low oxygen conditions.

Ecotoxicity and Human Health Effects: Excessive levels of nitrate in drinking water have caused serious illness and sometimes death. Nitrates are converted to nitrites by the body, which can interfere with the oxygen-carrying capacity of the blood, (methemoglobinemia). Children are much more sensitive to this effect than adults. Other health concerns relate to the production of nitrosamines following the reaction of food nitrites and secondary amines. Nitrosamines produce liver damage, hemorrhagic lung lesions, convulsions and coma in rats, and interfere with embryo development in experimental animals. The N-nitroso class of compounds includes potent carcinogens and mutagens. Nitrate/nitrites can be toxic to amphibians.

The material is classified as an ecotoxin* because the Fish LC50 (96 hours) is less than or equal to 0.1 mg/l

* Classification of Substances as Ecotoxic (Dangerous to the Environment)

Appendix 8, Table 1

Compiler's Guide for the Preparation of International Chemical Safety Cards: 1993 Commission of the European Communities.

Toxicity invertebrate: LC50(48)33-100mg/L

SODIUM TRIPOLYPHOSPHATE:

■ On the basis of available evidence concerning either toxicity, persistence, potential to accumulate and/or observed environmental fate and behaviour, the material may present a danger, immediate or long-term and/or delayed, to the structure and/or functioning of natural ecosystems.

For Phosphate: The principal problems of phosphate contamination of the environment relates to eutrophication processes in lakes and ponds. Phosphorus is an essential plant nutrient and is usually the limiting nutrient for blue-green algae.

Aquatic Fate: Lakes overloaded with phosphates is the primary catalyst for the rapid growth of algae in surface waters. Planktonic algae cause turbidity and flotation films. Shore algae cause ugly muddying, films and damage to reeds. Decay of these algae causes oxygen depletion in the deep water and shallow water near the shore. The process is self-perpetuating because an anoxic condition at the sediment/water interface causes the release of more adsorbed phosphates from the sediment. The growth of algae produces undesirable effects on the treatment of water for drinking purposes, on fisheries, and on the use of lakes for recreational purposes.

NONYLPHENOL, ETHOXYLATED:

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Section 12 - ECOLOGICAL INFORMATION

Marine Pollutant Yes
Fish LC50 (96hr.) (mg/l): 1.0- 11.2

■ Toxic to aquatic organisms.

For Alkylphenols and their Ethoxylates, or Propoxylates (APE):

Environmental fate: Alkylphenols are found everywhere in the environment, when released. Releases are generally as wastes; they are extensively used throughout industry and in the home. Alkylphenol ethoxylates are widely used surfactants in domestic and industrial products, which are commonly found in wastewater discharges and in sewage treatment plant effluents. These substances can "load" considerably in various environmental compartments.

Atmospheric Fate: Alkylphenols released to the atmosphere will exist in the vapor phase and are thought to be degraded by reaction with hydroxyl radicals, with a calculated half-life, for nonylphenol, of 0.3 days.

However, emissions to the air will be limited.

Terrestrial Fate: These substances will adsorb to organic soil substances. Adsorption decreases as certain chains in the chemical get longer and increases if water is present.

Aquatic Fate: These substances will partition to the sediment if they are released to water. These substances are expected to undergo primary breakdown in oxygenated river water at a relatively fast rate. Nonylphenols are susceptible to breakdown by sunlight in water. Light breakdown of with ethoxylated nonylphenol in water is much slower and is not expected to be an important fate process. The non-biological breakdown of these substances is negligible and biological breakdown of these substances does not readily take place. The half-life in surface water may be around 30 days.

Ecotoxicology: There is concern that APE metabolites, (NP, OP, NPE1-3), can mimic natural hormones and that the levels of the substances present in the environment may be sufficient to disrupt endocrine function in wildlife and humans. Organisms in different levels of the food chain may experience different responses to the natural hormone mimics found in these substances. These substances are not expected to be toxic to *Daphnia magna* water fleas; however, negative impacts on male fathead minnow reproduction have been noted. These substances may have a profound negative affect on reproduction in adult fishes. Alkylphenols are not readily biodegradable. The full breakdown pathway for APES has not yet been determined.

Biodegradation of APES produces less biodegradable products: alkylphenol mono- and di-ethoxylates, alkylphenoxy acetic/alkylphenoxy polyethoxy acetic acids, and alkylphenols. These metabolites frequently persist through sewage treatment and in rivers. Alkylphenols will accumulate in low oxygen conditions.

Metabolites of APES accumulate in organisms and are more toxic than the original compound. Estrogen mimicking effects have been seen in rainbow trout, mice, and chicken embryos. The insecticide chlordecone, (Kepone), shows similar behavior to alkylphenols, accumulating in liver and fat tissue, and eliciting estrogen mimicking activity. Green algae are the most sensitive species.

Daphnia magna EC50 (48 h): 86 mg/L *

Fish LC50 996 h): rainbow trout: 18 mg/L *

* [Huntsman]

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
sodium nitrite	LOW	No Data Available	LOW	HIGH
sodium tripolyphosphate	No Data Available	No Data Available	No Data Available	No Data Available
nonylphenol, ethoxylated	LOW	No Data Available	LOW	MED

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

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Section 14 - TRANSPORTATION INFORMATION

HAZCHEM:

None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADG7, IATA, IMDG

Section 15 - REGULATORY INFORMATION

Indications of Danger:

Xn

Harmful

POISONS SCHEDULE S6

REGULATIONS

Regulations for ingredients

sodium nitrite (CAS: 7632-00-0) is found on the following regulatory lists;

"Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (AQUA/1 to 6 - inorganic chemicals)", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (Domestic water supply - inorganic chemicals)", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (STOCK - inorganic chemicals)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm - Domestic water supply quality", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (Aquatic habitat)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (STOCK)", "Australia - Queensland Work Health and Safety Regulation - Restricted hazardous chemicals", "Australia - Victoria Occupational Health and Safety Regulations - Schedule 9: Materials at Major Hazard Facilities (And Their Threshold Quantity) Table 2", "Australia - Western Australia Hazardous Substances Prohibited for Specified Uses or Methods of Handling", "Australia Drinking Water Guideline Values For Physical and Chemical Characteristics", "Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 2", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 7", "Australia Work Health and Safety Regulations 2011 - Restricted hazardous chemicals", "FisherTransport Information", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Numbering System for Food Additives", "OECD List of High Production Volume (HPV) Chemicals", "Sigma-AldrichTransport Information"

sodium tripolyphosphate (CAS: 7758-29-4,15091-98-2) is found on the following regulatory lists;

"Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "FisherTransport Information", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "International Numbering System for Food Additives", "OECD List of High Production Volume (HPV) Chemicals", "Sigma-AldrichTransport Information"

nonylphenol, ethoxylated (CAS: 9016-45-9,26027-38-3,26571-11-9) is found on the following regulatory lists;

"Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6", "FisherTransport Information", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "International Chemical Secretariat (ChemSec) SIN List (*Substitute It Now!)", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR List of Chemicals for Priority Action", "OSPAR List of Substances of Possible Concern", "Sigma-AldrichTransport Information", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments"

No data for W5C Water Conditioner for Magnetic Particles (CW: 4868-76)

Section 16 - OTHER INFORMATION

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
nonylphenol, ethoxylated	26571- 11- 9	Xi; R38

continued...

W5C WATER CONDITIONER FOR MAGNETIC PARTICLES

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Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
sodium tripolyphosphate	7758- 29- 4, 15091- 98- 2
nonylphenol, ethoxylated	9016- 45- 9, 26027- 38- 3, 26571- 11- 9

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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Issue Date: 19-Mar-2013

Print Date: 19-Mar-2013

This is the end of the MSDS.