




1.0 Identification

Product Identifier	SYSTEM – CLEAN Plant safe irrigation line cleaner
Other Means of Identification	SYSTEM – CLEAN
Recommended Use and Restrictions on use	Dilute and apply as directed on the label
Details of Importer	APTUS PLANT TECH Australia Unit 1/11 Didswith St, East Brisbane QLD 4169
Emergency Phone Number	Australian Poisons Information (24 hours / 7 days) ☎ 13 11 26

2.0 GHS Hazard identification

Classification of The Hazardous Chemical	Eye Irritation - Category 2A
Signal Word	WARNING
Hazard Statement	Causes serious eye irritation
Precautionary Statements	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses. If present and easy to do. Continue rinsing.
GHS Pictograms	

3.0 Ingredients / Composition %w/w

Ingredient Name/Nature	<2	2>10	>10	>20	>30	>40	>50	>60	>70	>80	>90	>100
Water 7732-18-5												
Proprietary Ingredients determined to be hazardous at that concentration												
Hydrogen peroxide 7722-84-1												

4.0 First Aid Measures

First Aid Instructions	Danger? Response? Yes ⇒ Make comfortable, monitor ⇒ No Send for Help. Airway? Breathing? No ⇒ CPR (30 compress: 2 breathes). Defibrillation. ⇒ Yes (Recovery Position & Monitor)
Swallowed	Rinse mouth and SPIT, if conscious give a glass of water. IF exposed or if you feel unwell: contact a Poisons Information Centre (e.g. phone Australia 13 11 26; or a doctor).
Eye	Rinse cautiously with running water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. For advice , contact a Poisons Information Centre (e.g. phone Australia 13 11 26; or a doctor).
Skin	Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. , For advice , contact a Poisons Information Centre (e.g. phone Australia 13 11 26; or a doctor).
Inhaled	Remove to fresh air; rinse mouth and spit, for advice , contact a Poisons Information Centre (e.g. phone Australia 13 11 26; or a doctor).
Symptoms caused by exposure	Seek medical attention in event of irritation.
Medical Attention / Special Treatment	Hydrogen peroxide at these concentrations is a strong oxidant. Direct contact with the eye is likely to cause corneal damage especially if not washed immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Because of the likelihood of corrosive effects on the gastrointestinal tract after ingestion, and the unlikelihood of systemic effects, attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. There is a remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction of severe distension due to gas formation.

5.0 Fire Fighting Measures

Extinguishing media	Water. Do not use any other substance.
Specific Hazards arising from the chemical	In closed unventilated containers, risk of rupture due to the increased pressure from decomposition.
Special protective equipment and precautions for fire fighters HAZCHEM	Use water spray to cool fire exposed surfaces and protect personnel. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.



6.0 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Isolate and post spill area. Keep people away from and upwind of spill/leak. Eliminate all sources of ignition and remove combustible materials.
Environmental precautions	Concentrate as supplied should not enter to waterways, may cause localised effects.
Methods and materials for containment and cleaning up	Dike to collect large liquid spills. Stop leak and contain spill if this can be done safely. Small spillage: Dilute with large quantities of water.

7.0 Storage and Handling

Precautions for Safe Handling	Keep/Store away from clothing/ combustible materials. Wear personal protective equipment. Reference to other sections. Never return unused hydrogen peroxide to original container. Contamination may cause decomposition and generation of oxygen gas which could result in high pressures and possible container rupture. Empty drums should be triple rinsed with water before discarding. Utensils used for handling hydrogen peroxide should only be made of glass, stainless steel, aluminium or plastic. Pipes and equipment should be passivated before first use. Use only in well-ventilated areas. Hydrogen peroxide should be stored only in vented containers and transferred only in a prescribed manner.
Safe Storage Practice	Keep containers in cool areas out of direct sunlight and away from combustibles. Provide mechanical general and/or local exhaust ventilation to prevent release of vapor or mist into work environment. Containers must be vented. Keep/store only in original container. Storerooms or warehouses should be made of non-combustible materials with impermeable floors. In case of release, spillage should flow to safe area. Containers should be visually inspected on a regular basis to detect any abnormalities (swollen drums, increases in temperature, etc.).
- Avoid	Avoid storing with strong acids.
- Control	Cross contamination.
- Maintain	Cool, dry environment.
- Other	Keep out of reach of children.

8.0 Exposure Controls / Personal Protection

National Exposure Standards	None identified				
Control Banding	Band Zero – Household or Consumer Use	Band 1 – good industrial hygiene practice	Band 2 – use local exhaust ventilation	Band 3 – enclose the process	Other
Engineering Controls	Ensure that eyewash stations and safety showers are close to the workstation/location. Ensure adequate ventilation.				
PPE	Wear protective gloves/eye protection/face protection. The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.				

9.0 Physical & Chemical Properties

Appearance	Clear, colourless liquid	Partition Co-efficient n-Actonel/water	not determined
Odour	odourless	Solubility	water soluble
pH	no data	Vapour Pressure	not determined
Melting / Freezing Pt	no data	Vapour Density	30 mmHg @ 30 °C
Boiling Point	~ 101°C	Relative Density	not determined
Flash Point	no data	Auto-ignition Temp	not determined
Evaporation Rate	> 1 (n-butyl acetate=1)	Decomposition Temp	not determined
Flammability	not determined	Viscosity	not determined
Explosive Limits	not determined	Other	Protect from freezing.

10.0 Stability & Reactivity

Reactivity	Reactive and oxidizing agent.
Chemical Stability	Stable under normal conditions. Decomposes on heating. Stable under recommended storage conditions.
Possibility of Hazardous Reactions	Contact with organic substances may cause fire or explosion. Contact with metals, alkalis, reducing agents and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal decomposition.
Conditions to avoid	Excessive heat; Contamination; Exposure to UV-rays; pH variations.
In compatible materials	Copper alloys, galvanized iron. Strong reducing agents. Heavy metals. Iron. Copper alloys. Contact with metals, metallic ions, alkalis, reducing agents and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal decomposition.



Hazardous Decomposition Products	Oxygen which supports combustion. Liable to produce overpressure in container.
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11.1 Known Toxicological Information

Ingredient Name / Type	Data
Acute Toxicity	No significant acute toxicological data identified in literature search.
Skin Corrosion / Irritation	Moderately irritating.
Serious Eye Damage	Corrosive. Risk of serious damage to eyes.
Irritation	
Respiratory or skin sensitisation	Did not cause sensitisation on laboratory animals.
Germ cell mutagenicity	Non-mutagenic.
Carcinogenicity	This product contains hydrogen peroxide. The International Agency for Research on Cancer (IARC) has concluded that there is inadequate evidence for carcinogenicity of hydrogen peroxide in humans, but limited evidence in experimental animals (Group 3 - not classifiable as to its carcinogenicity to humans). The American Conference of Governmental Industrial Hygienists (ACGIH) has concluded that hydrogen peroxide is a 'Confirmed Animal Carcinogen with Unknown Relevance to Humans' (A3).
Reproductive toxicity	No evidence of reproductive effects found in animal studies.
Specific Target Organ Toxicity – single exposure	Eyes, Respiratory System, Skin.
Specific Target Organ Toxicity (STOT) – repeated exposure	No data.
Aspiration hazard.	No data available.
Skin - Acute	The materials may cause skin irritation after prolonged or repeated exposure or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Contact may cause temporary whitening and a tingling sensation.
Inhaled - Acute	Not normally a hazard due to a non-volatile nature of product. The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Never the less good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Swallowed - Acute	The materials have NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of a lack of corroborating animal or human evidence. May cause blistering and bleeding from the mouth and stomach. Large amounts of ingested hydrogen peroxide may evolve quantities of oxygen which could hyperdistend the gastro-intestinal tract.
Eye - Acute	The material may produce severe irritation to the eyes causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
Early Onset Symptoms	Localised irritation
Delayed Health Effects from exposure	This product contains hydrogen peroxide. The International Agency for Research on Cancer (IARC) has concluded that there is inadequate evidence for carcinogenicity of hydrogen peroxide in humans, but limited evidence in experimental animals (Group 3 - not classifiable as to its carcinogenicity to humans). The American Conference of Governmental Industrial Hygienists (ACGIH) has concluded that hydrogen peroxide is a 'Confirmed Animal Carcinogen with Unknown Relevance to Humans' (A3).
Exposure Level & Health Effects	Repeated or prolonged exposure to spray mist may produce throat and respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated or prolonged exposure may produce sore throat, and nose bleeds. Prolonged ingestion causes damage to the gastrointestinal tract. May cause damage to the central nervous system (CNS), and blood. Repeated use of hydrogen peroxide topical solution as a mouthwash or gargle may produce a condition known as 'hairy tongue' or may cause irritation of the buccal mucous membrane. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Prolonged or repeated skin contact may cause dermatitis. Prolonged or intense skin contact or splashes in the eyes may cause corneal damage and severe injury. Chronic exposure to vapour produces eye irritation and gradual bleaching of their hair.



12.0 Ecological Information

Ecotoxicity (as supplied)	Hydrogen peroxide is naturally produced by sunlight (between 0.1 and 4 ppb in air and 0.001 to 0.1 mg/L in water). Not expected to have significant environmental effects
Persistence & Biodegradability	Hydrogen peroxide in the aquatic environment is subject to various reduction or oxidation processes and decomposes into water and oxygen. Hydrogen peroxide half-life in freshwater ranged from 8 hours to 20 days, in air from 10 - 20 hours, and in soils from minutes to hours depending upon microbiological activity and metal contamination.
Bioaccumulative Potential	Material may have some potential to bioaccumulate but will likely degrade in most environments before accumulation can occur.
Mobility in soil	Will likely be mobile in the environment due to its water solubility.
Other effects	Decomposes into oxygen and water. No adverse effects.

13.0 Disposal Considerations

Disposal Containers & Methods	Rinse container; dispose as permitted by local jurisdiction.
Physical/chemical properties that may affect disposal options.	None identified
Effects of sewage disposal.	Diluted solutions are unlikely to contribute to issues of concern
Special precautions for incineration or land fill.	Diluted solutions are unlikely to contribute to issues of concern

14.0 Transport Information

UN Number	Proper Shipping Name / Technical Name	Transport Hazard Class	Packaging Group
UN-2984	HYDROGEN PEROXIDE, AQUEOUS SOLUTION	nil	nil
Environmental Hazards for Transport Purposes		Special Precautions for user	
Hazard class 5.1		nil	

15.0 Regulatory Information

Montreal Protocol	Stockholm Convention	Rotterdam Convention	Basel Convention	MARPOL
Not applicable	Not included	Not Included	Not Included	Not Included
SUSMP	Excluded from scheduling requirements			
Prohibitions / Licensing Restrictions	This product is exempt for BICON permit. No other restrictions identified.			
APVMA	Excluded by purpose			
NICNAS	All ingredients are included in AICS			

16.0 Other Information

16.1 Consumer & General Usage Information

Directions for use	Dilute and apply as directed on the label.
Directions for Removal	Rinse under running water.
Nano Materials	None identified

16.2 SDS Preparation

Date Prepared	4 th November 2020.
Changes Made	First edition for Australia
Reference Standards	Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice February 2016. ISBN 978-0-642-33311-7. GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) Fourth revised edition
Resources Relied upon include	Hazardous Substances Data Bank (HSDB) https://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB Suppliers' SDS; RTECS Toxicity Database; IRAC; CDC NIOSH, NITE, HSIS, Safework Australia GHS Hazardous Chemical Information List. Information provided by manufacturer(s).

Disclaimer: This SDS provides safety data only for the product and circumstances of use nominated. The SDS summarises our best knowledge of the specific, well-known and equivocally demonstrated health and safety hazard information pertaining to workplace use of the nominated substance(s) however the author expressly disclaims that the SDS is complete, is a representation or is a guarantee. Published and other resources have been relied upon, and in some cases conflicting information has been identified. Each user should read the SDS and consider the information in the context of their specific conditions and circumstances, and in conjunction with other products. If clarification is required or further information sought in order to make a risk assessment the user should contact the nominated sponsor company. The responsibility for products sold is subject to our standard terms and conditions that are available on request.



16.3 Key abbreviations or acronyms used

%	Percent (parts per hundred)
*C or °C	degrees Celsius
<	less than
>	greater than
ACCC	Australian Competition and Consumer Commission
ADG	Australian Dangerous Goods
AICS	Australian Inventory of Chemical Substances
APVMA	Australian Pesticides and Veterinary Medicines Authority
AS	Australian Standard
ASCC	Australian Society of Cosmetic Chemists
bw	Body weight (nominally a human adult of 60kg is applied)
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (Registry Number)
cc	cubic centimetres (equivalent to mL)
COD	Chemical Oxygen Demand
CMR	CMR substances: Article 15 of the EU Cosmetics Regulation 1223/2009 contains provisions on the use of CMR in cosmetic products. Typically substances classified as CMR substances Cat 1A, 1B, or 2 under Part 3 of Annex IV Regulation (EC) No 1272/2008 are banned for use in cosmetic products
COSING	The European Commission database with information on Cosmetic Ingredients & Substances Dangerous Goods
EINECS	European Inventory of Existing Commercial Chemical Substances (Identifying Number)
dw	Dry weight
DNEL	Derived No effect level
EU	Europe / European
FSANZ	Food Standards Australia New Zealand
g	gram
GHS	Globally Harmonised System (safety symbols and labelling)
GMO	Genetically modified organism
h or hr	Hour
HAZCHEM	Emergency action code of numbers and letters that provide information to emergency services especially fire fighters
HSIS	The Safe Work Australia Hazardous Substances Information System
IATA	The International Air Transport Association
IMAP	NICNAS Inventory Multi-tiered Assessment and Prioritisation
ICAO	The International Civil Aviation Organization
IFA	The International Fragrance Association
INCI	The International Nomenclature of Cosmetic Ingredients
kg	kilogram
L	Litre
LC ₅₀	LC ₅₀ is the average concentration of a material (by a defined route) that causes the death of 50% (one half) of a group of (defined) test animals. Normally quoted in mg/kg body weight.
LD ₅₀	LD ₅₀ is the average dose of a material, given all at once, which causes the death of 50% of a group of (defined) test animals. Normally quoted in mg/kg body weight. Products with a LD ₅₀ of less than 5000mg/kg are scheduled poisons in Australia (see SUSMP)
LD _{Lo}	Lethal Dose Low, is the minimum amount of a material shown to be lethal to a specified type of animal. Typically quoted in mg/kg body weight.
m or min	minute
m ³	cubic metre
Max or max	maximum
mg	milligram
Min or min	minimum
mL	millilitre
mm	millimetre
mm Hg	millimetre of Mercury
MOS	Margin of Safety
MRL	Maximum Residue Limit
MSDS	Material Safety Data Sheet (see also SDS)
Nano	Nano(sized) material / Nano Technology; ... industrial materials (including a cosmetic ingredient) comprising 10% or more by composition that has been intentionally produced, manufactured or engineered to have either an internal or external property that is a size range typically between 1 nm and 100 nm.
ng	nanogram
NICNAS	The National Industrial Chemicals Notification and Assessment Scheme (AUSTRALIA)
NIOSH	The National Institute for Occupational Safety and Health (USA)
NOAEL	No observed Adverse Effects Limit
NOHSC	National Occupational Health and Safety Commission (AUSTRALIA)
NOS	Not otherwise specified



NZS	New Zealand Standard
OECD	Organization for Economic Co-operation and Development (Test Method number)
OSHA	The Occupational Safety and Health Administration (USA)
Perm.	Permethrin (Active ingredient of this formulation)
PEL	Permissible Exposure Limit
pH	(pH) A measure of acidic (less than 7) or alkalinity (above 7); extreme values represent extreme acidic or alkaline conditions. Typically products with a pH less than three or greater than 11 are scheduled poisons (SUSMP)
PNEC	Predicted no effect concentration
ppb	parts per billion
PPE	Personal Protective Equipment
ppm	parts per million
RTECS	The Registry of Toxic Effects of Chemical Substances
S2	Schedule 2, SUSMP Pharmacy Medicine – Substances, the safe use of which may require advice from a pharmacist and which should be available from a pharmacy or, where a pharmacy service is not available, from a licensed person.
S3	Schedule 3, SUSMP Pharmacist Only Medicine – Substances, the safe use of which requires professional advice but which should be available to the public from a pharmacist without a prescription.
S4	Schedule 4, SUSMP Prescription Only Medicine , or Prescription Animal Remedy – Substances, the use or supply of which should be by or on the order of persons permitted by State or Territory legislation to prescribe and should be available from a pharmacist on prescription.
S5	Schedule 5, SUSMP Caution – Substances with a low potential for causing harm, the extent of which can be reduced through the use of appropriate packaging with simple warnings and safety directions on the label.
S6	Schedule 6, SUSMP Poison – Substances with a moderate potential for causing harm, the extent of which can be reduced through the use of distinctive packaging with strong warnings and safety directions on the label.
S7	Schedule 7, SUSMP Dangerous Poison – Substances with a high potential for causing harm at low exposure and which require special precautions during manufacture, handling or use. These poisons should be available only to specialized or authorized users who have the skills necessary to handle them safely. Special regulations restricting their availability, possession, storage or use may apply.
S8	Schedule 8, SUSMP Controlled Drug – Substances which should be available for use but require restriction of manufacture, supply, distribution, possession and use to reduce abuse, misuse and physical or psychological dependence.
S9	Schedule 9, SUSMP Prohibited Substance – Substances which may be abused or misused, the manufacture, possession, sale or use of which should be prohibited by law except when required for medical or scientific research, or for analytical, teaching or training purposes with approval of Commonwealth and/or State or Territory Health Authorities.
S10	Schedule 10, SUSMP Substances of such danger to health as to warrant prohibition of sale, supply and use - Substances which are prohibited for the purpose or purposes listed for each poison.
SCCP	Scientific Committee on Cosmetic Products and Non-Food Products (EUROPE)
SDS	Safety Data Sheet, (previously called MSDS) now SDS under GHS
STEL	Short Term Exposure Limit
SUSMP	Standard for the Uniform Scheduling of Medicine & Poisons (AUSTRALIA) also Poisons Standard. Poisons are not scheduled on the basis of a universal scale of toxicity. Although toxicity is one of the factors considered, and is itself a complex of factors, the decision to include a substance in a particular Schedule also takes into account many other criteria such as the purpose of use, potential for abuse, safety in use and the need for the substance.
T1 or TI	NICNAS IMPA Framework Low risk; chemicals that are not expected to pose a concern to workers, public health or the environment
T2 or TII	NICNAS IMPA Framework Assessable risk; products not classified as T1 risk information on a substance-by-substance or chemical category-by-category
TGA	Therapeutic Goods Administration (AUSTRALIA)
TLV	Threshold Limit Value
TWA	Time Weighted Average
ug	microgram
uL	microlitre
UN	United Nations (number)
US or USA	The United States of America

End of SDS