Infosafe No™	1CH7T	Issue Date : November 2016	RE-ISSUED by CHEMSUPP

Product Name : **UNIVERSAL INDICATOR Solution (pH 3 - pH 11)**

Classified as hazardous

1. Identification

GHS Product Identifier	UNIVERSAL INDICATOR Solution (pH 3 - pH 11)
Company Name	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia
Telephone/Fax Number	Tel: (08) 8440-2000 Fax: (08) 8440-2001
Recommended use of the chemical and restrictions on use	pH indicator solution

Other Names	**Name**	**Product Code**
	UNIVERSAL INDICATOR Solution (pH 3 - pH 11)	UL000

Other Information

EMERGENCY CONTACT NUMBER: +61 08 8440 2000
Business hours: 8:30am to 5:00pm, Monday to Friday.

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture	Eye Damage/Irritation: Category 2A Flammable Liquids: Category 2
Signal Word (s)	DANGER
Hazard Statement (s)	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation.
Pictogram (s)	Flame, Exclamation mark

Precautionary statement – Prevention	P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting/.../equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P264 Wash thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statement – Response	P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention. P370+P378 In case of fire: Use dry sand, dry chemical or alcohol resistant foam for extinction.
Precautionary statement – Storage	P403+P235 Store in a well-ventilated place. Keep cool.
Precautionary statement – Disposal	P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Chemical Characterization Liquid

Ingredients

Name	CAS	Proportion	Hazard Symbol	Risk Phrase
Ethanol denatured	64-17-5	50-60 %		
Water	7732-18-5	40-50 %		
Phenolphthalein	77-09-8	0.03-0.04 %		
Bromothymol blue	76-59-5	0.03-0.04 %		
Methyl red, sodium salt	845-10-3	0.01-0.02 %		
Sodium hydroxide	1310-73-2	0.005 %		
Methyl orange, sodium salt	547-58-0	0.005 %		

4. First-aid measures

Inhalation If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Ingestion Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Skin Wash affected areas with copious quantities of water. Remove contaminated clothing and wash before re-use. If persistent irritation occurs, obtain medical attention.

Eye contact Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. If rapid recovery does not occur, obtain medical attention

First Aid Facilities Maintain eyewash fountain and safety shower in work area.

Advice to Doctor Treat symptomatically based on judgement of doctor and individual reactions of the patient.

Other Information For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products Irritating and toxic fumes and gases, acrid smoke and fumes, oxides of sulfur, carbon, nitrogen and sodium, sodium, hydrogen bromide and phenols.

Specific Methods Caution: Use of water spray when fighting fire may be inefficient.
Small fire: Use foam, dry chemical, CO2 or water spray.
Large fire: Use foam, fog or water spray - Do not use water jets.
If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers.

Specific hazards arising from the chemical HIGHLY FLAMMABLE: Low flash point - Will be easily ignited by heat, sparks or flames at ambient temperatures. Vapours will form explosive mixtures with air. Vapours will travel to source of ignition and flash back. Fire may produce irritating, poisonous and/or corrosive gases. Containers may explode when heated. The liquids is lighter than water. Vapours are heavier than air and will collect in low or confined areas (drains, basements, tanks). Vapours from run-off may create an explosion hazard.

Hazchem Code 3[Y]E

Precautions in connection with Fire SCBA and structural firefighter's uniform may provide limited protection. Fully-encapsulating, gas-tight suits should be worn for maximum protection.

6. Accidental release measures

Spills & Disposal ELIMINATE all ignition sources (no smoking, flares, sparks or flame) within at least 50m - All equipment used in handling the product must be earthed.
Do not touch or walk through spilled material.
Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.
Vapour-suppressing foam may be used to control vapours.
Absorb spill with earth, sand or other non-combustible material - Use clean, non-sparking tools to collect material and place it in loosely-covered metal or plastic containers for later disposal. Water spray may be used to knock down or divert vapour clouds.
SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

Personal Precautions Evacuate the area of all non-essential personnel. Avoid inhalation, contact with skin, eyes and clothing.

Personal Protection Wear protective clothing specified for normal operations (see Section 8)

7. Handling and storage

Precautions for Safe Handling	Avoid ingestion and inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Use only in a well-ventilated area. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Keep container tightly closed. Keep away from heat, sparks and flame. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Empty containers retain product residue, (liquid and/or vapour), and can be dangerous.
Conditions for safe storage, including any incompatabilities	Flammables-area. Store in tightly closed containers, in a cool, dry, well-ventilated area, away from incompatible substances. Keep away from heat and all sources of ignition (sparks and flame). Keep from contact with oxidizing materials. Do not store near perchlorates, peroxides, chromic acid or nitric acid.
Corrosiveness	Ethanol is not corrosive to cast iron, steel stainless steel, copper and its alloys, nickel and its alloys and aluminium. May react with hot aluminium.
Storage Regulations	Refer Australian Standard AS 1940-2004 'The storage and handling of flammable and combustible liquids'.
Storage Temperatures	Store at room temperature (15 to 25 °C recommended).

8. Exposure controls/personal protection

Other Exposure Information	A time weighted average (TWA) has been established for Sodium hydroxide (Safe Work Australia) of 2 mg/m³ (Peak limitation) and for Ethyl alcohol (Safe Work Australia) of 1,880 mg/m³, (1,000 ppm). The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. Peak Limitation - a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes.
Appropriate 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 vapours or mists. Select and use respirators in accordance with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and respirator type depends on exposure levels.
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: NR latex and neoprene.
Personal Protective Equipment	Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.
Footwear	Rubber boots.
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.

9. Physical and chemical properties

Form	Liquid
Appearance	Green solution which may develop a red colour during storage.
Odour	Ethanolic odour.
Freezing Point	-37 °C
Solubility in Water	Soluble.
Solubility in Organic Solvents	Easily soluble in n-octanol. Soluble in methanol, diethyl ether, acetone.
Specific Gravity	~0.8
Vapour Pressure	Ethanol: 5.9 kPa (44.3 mm Hg) at 20 °C.

Vapour Density (Air=1)	Ethanol: 1.59.
Evaporation Rate	>1 (ether=1)
Odour Threshold	Ethanol: 49-716 ppm (geometric mean: 180 ppm) (detection); 100 ppm (recognition).
Flash Point	27 °C
Flammability	HIGHLY FLAMMABLE. Keep away from heat, sparks or naked flames. Use flameproof equipment and fittings to prevent flammability risk. Electrically link and ground metal containers for transfer of the product to prevent accumulation of static electricity. Ensure adequate ventilation to prevent an explosive vapour-air mixture. Vapours will travel considerable distances to sources of ignition.
Flammable Limits - Lower	2.0 vol %
Flammable Limits - Upper	12.0 vol%
Explosion Properties	Can release vapours that form explosive mixtures at temperatures above the flashpoint. Containers may explode in the heat of a fire.
Saturated Vapour Concentration	Ethanol: 58300 ppm (5.8%) at 20 °C (calculated)

10. Stability and reactivity

Chemical Stability	Stable under normal temperatures and pressures.
Conditions to Avoid	Incompatible materials, ignition sources, excess heat, oxidizers.
Incompatible Materials	Strong oxidizing agents, acids, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium-tert-butoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide.
Hazardous Decomposition Products	Irritating and toxic fumes and gases, oxides of sulfur, carbon, nitrogen and sodium, sodium, hydrogen bromide and phenols.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): 7060 mg/kg - Ethanol;
Acute Toxicity - Dermal	LD50 (rabbit): 15800 mg/kg - Ethanol (anhydrous substance);
Acute Toxicity - Inhalation	LD50 (rat): 38mg/l/10h - Ethanol.
Ingestion	May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.
Inhalation	Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentrations. Vapours may cause dizziness or suffocation.
Skin	Causes moderate skin irritation. May be absorbed through the skin. May cause cyanosis of the extremities.
Eye	Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage.
Carcinogenicity	Phenolphthalein [77-09-8] is evaluated in the IARC Monographs (Vol. 76; 2000) as Group 2B: Possibly carcinogenic to humans.
Chronic Effects	Prolonged exposure to ethanol may cause liver, kidney, and heart damage.
Mutagenicity	No evidence of mutagenic properties.

12. Ecological information

Ecological Information	No ecological problems are to be expected when the product is handled and used with due care and attention.

Ecotoxicity	When used properly, no impairments in the function of waste-water-treatment plants are to be expected. In high concentrations: Harmful effect on aquatic organisms.
Persistence and degradability	Ethanol: Abiotic degradation: Rapid degradation. (air) Biologic degradation: Biodegradation: 94 % modified OECD screening test; Readily biodegradable. Further ecologic data: BOD: 0.93-1.67 g/g; COD: 1.99 g/g; ThOD: 2.10 g/g; BOD 74 % of ThOD /5 d; COD 90 % of ThOD.
Mobility	Distribution: log P(oct): -0.32 (ethanol).
Bioaccumulative Potential	No bioaccumulation is to be expected (log P(o/w <1) (ethanol).
Environmental Protection	Do not allow to enter waters, waste water, or soil!
Acute Toxicity - Fish	LC50 (L.idus): 8140 mg/l /48 h (ethanol).
Acute Toxicity - Daphnia	EC50 (Daphnia magna): 9268-14221 mg/l /48 h (ethanol).
Acute Toxicity - Algae	Maximum permissible toxic concentration: LC5 (Sc.quadricauda): 5000 mg/l /7 d (Ethanol).
Acute Toxicity - Bacteria	Maximum permissible toxic concentration: EC5 (Ps.putida): 6500 mg/l /16 h (Ethanol).
Acute Toxicity - Other Organisms	Maximum permissible toxic concentration: Protozoa: EC5 (E.sulcatum): 65 mg/l /72 h (Ethanol).

13. Disposal considerations

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

14. Transport information

Transport Information	Dangerous Goods of Class 3 Flammable Liquids, are incompatible in a placard load with any of the following: - Class 1, Class 2.1, if both the Class 3 and Class 2.1, dangerous goods are in bulk, Class 2.3, Class 4.2, Class 5, Class 6, if the Class 3 dangerous goods are nitromethane and Class 7.
U.N. Number	1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
Transport hazard class(es)	3
Hazchem Code	3[Y]E
Packaging Method	3.8.3RT1
Packing Group	II
EPG Number	3A1
IERG Number	14

15. Regulatory information

Poisons Schedule	Not Scheduled

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons No. 6', Commonwealth of Australia, February 2015. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010. Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'. Safe Work Australia, 'Hazardous Substances Information System, 2005'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances

(2011)'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.

Contact Person/Point

Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT:
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