

1. Identification of Substance & Company

Product	
Product name	Coating solution
HSNO approval	non hazardous
Approval description	non hazardous
UN number	NA
Proper Shipping Name	NA
Packaging group	NA
Hazchem code	NA
Uses	Coating solution of EV reagents kit

Company Details

Company	IZON Science Ltd	
Address	8C Homersham Place Burnside Christchurch 8053 New Zealand	PO Box 39168 Burnside Christchurch 8053 New Zealand
Telephone	+64 3 357 4270	
Fax	+64 3 357 4273	
email	info@izon.com	
Website	www.izon.com	

2. Hazard Identification

Approval

This product is not considered to be a hazardous substance under the the Hazardous Substances and New Organisms Act (HSNO).

Classes	Hazard Statements
----------------	--------------------------

none

SYMBOLS

none

Other Classifications

There are no other Classifications that are known to apply.

Not classified as hazardous in accordance with EC directives.

This product has been assessed according to GHS and has not been found to be hazardous.

Precautionary Statements

none

3. Composition / Information on Ingredients

Component	CAS/ Identification	Conc (%)
Binding agent	proprietary	10%
Wetting agent	proprietary	<0.1%
Sodium Azide	26628-22-8	<0.1%
Phosphate Buffered Saline (PBS)	mixture	balance

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. First Aid

General Information

If medical advice is needed, have product container or label at hand. You should seek medical advice if you feel that you may have been harmed or irritated by this product.

Recommended first aid facilities Ready access to running water is recommended.

Exposure	
Swallowed	Do NOT induce vomiting. Give a glass of water to drink. Contact a doctor if any symptoms occur.
Eye contact	If product gets in eyes, wash material from them with running water for several minutes. If any symptoms persist, seek medical advice.
Skin contact	Flush immediately with large amounts of water. Remove all contaminated clothing. Contact a doctor if experiencing any symptoms.
Inhaled	Generally, inhalation of fumes is unlikely to result in adverse health effects. If coughing, dizziness or shortness of breath is experienced, remove the patient to fresh air immediately. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor.
Advice to Doctor	
Treat symptomatically	

5. Firefighting Measures

Fire and explosion hazards:	There are no specific risks for fire/explosion for this chemical. It is non-flammable.
Suitable extinguishing substances:	Carbon dioxide, extinguishing powder, foam, fog sprays.
Unsuitable extinguishing substances:	Unknown
Products of combustion:	Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Oxides of phosphorous, hydrogen chloride gas, potassium oxides, sodium oxides. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
Protective equipment:	No special measures are required.
Hazchem code:	Not applicable

6. Accidental Release Measures

Containment	There is no current legal requirement for containment of this product.
Emergency procedures	Generally the containers size will limit a large spill from occurring. If a significant spill occurs: Stop leak if safe or necessary. Isolate area. Collect spill, see below. Transfer to container for disposal. Dispose of according to guidelines below (Section 13).
Clean-up method	This product is not considered flammable or ecotoxic. Small spills do not require any special clean up method. Larger spills (e.g., greater than 10kg) should be mopped up and collected.
Disposal	Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
Precautions	No special protective clothing is normally necessary.

7. Storage & Handling

Storage	Avoid storage of harmful substances with food. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10. Keep out of reach of children.
Handling	Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 10mg/m³ for dusts and mists when limits have not otherwise been established.

NZ Workplace Exposure Stds (2013)	Ingredient	WES-TWA	WES-STEL
	Sodium Azide	Ceiling 0.11ppm (0.29mg/m ³)	

International Limit Values for Sodium Azide (as NaN₃), CAS number 26628-22-8

Country	Limit Value – Eight hours	Limit value – short term
Australia		Ceiling 0.11ppm (0.29mg/m ³)
European Union	0.1mg/m ³	0.3mg/m ³
United Kingdom	0.1mg/m ³	0.3mg/m ³
United States		Ceiling: 0.1ppm as HN ₃ (skin), 0.3 mg/m ³ as NaN ₃ (skin)

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety in Employment Act 1992 (HSE). Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

Eyes	Protective eyewear is not normally necessary when using this product. However, it always prudent to use protective eyewear if splashes are likely or if handling material in bulk.
Skin	If discomfort is felt (e.g., if pre-existing conditions exist, such as dermatitis, cuts or sensitive skin), gloves may be helpful. If you suffer from dermatitis type skin conditions, use gloves. Nitrile or NBR gloves are recommended. Replace frequently. Gloves should be checked for tears or holes before use.
Respiratory	A respirator when airborne concentrations approach the WES (section 8). Use an organic vapour cartridge with a dust/mist filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance	clear liquid
Odour	odourless
pH	7.0-7.2
Vapour pressure	no data
Viscosity	no data
Boiling point	no data
Volatile materials	no data
Freezing / melting point	no data
Solubility	soluble in water
Specific gravity / density	1.00
Flash point	non flammable
Danger of explosion	no data
Auto-ignition temperature	no data
Upper & lower flammable limits	no data
Corrosiveness	non corrosive

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
Incompatible groups	none known
Substance Specific Incompatibility	none known
Hazardous decomposition products	none known
Hazardous reactions	none known

11. Toxicological Information

Summary

IF SWALLOWED: large quantities may cause vomiting, diarrhoea, dehydration and congestion. Hypertonic salts (e.g. this mixture) can cause inflammation of the gastrointestinal tract.

Supporting Data

Acute	Oral	Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (oral, rat) for the mixture is >5,000 mg/kg.
	Dermal	No evidence of dermal toxicity.
	Inhaled	No evidence of inhalation toxicity.
	Eye	The mixture is not considered to be an eye irritant.
	Skin	The mixture is not considered to be a skin irritant.
Chronic	Sensitisation	No ingredient present at concentrations > 0.1% is considered a sensitizer.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present at concentrations > 0.1% is considered a carcinogen. No component is listed by IARC as a probable, possible or confirmed carcinogen.
	Reproductive / Developmental	No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	Systemic	No ingredient present at concentrations > 1% is considered a target organ toxicant.
	Aggravation of existing conditions	None known.

12. Ecological Data

Summary

This material is not considered to be ecotoxic.

Supporting Data

Aquatic	No evidence of aquatic toxicity for any of the ingredients present >1%.
Bioaccumulation	No evidence of bioaccumulation
Degradability	Expected to be rapidly degradable.
Soil	No evidence of soil toxicity.
Terrestrial vertebrate	Not considered to be toxic towards terrestrial vertebrates
Terrestrial invertebrate	No evidence of toxicity towards terrestrial invertebrates.
Biocidal	no data
Environmental effect levels	No EELs are available for this mixture or ingredients

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Dispose of residue and solutions that cannot be reused to sewer. If this is not possible dilute with water (at least 5 times as much water) and drain.
Contaminated packaging	Rinse containers with water before disposal. Preferably re-cycle container, otherwise send to landfill or similar.

14. Transport Information

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

This mixture is not considered a hazardous substance for transport on land.

UN number:	NA	Proper shipping name:	NA
Class(es)	NA	Packing group:	NA
Precautions:	NA	Hazchem code:	NA

IMDG

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN number:	NA	Proper shipping name:	NA
Class(es)	NA	Packing group:	NA
Precautions:	NA	EmS	NA

IATA

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN number:	NA	Proper shipping name:	NA
Class(es)	NA	Packing group:	NA
Precautions:	NA	ERG Code	NA

15. Regulatory Information

NEW ZEALAND:

This substance is not considered to be hazardous under HSNO.

Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix)

Not applicable

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health, Safety in Employment Act and Regulations, local Council Rules and Regional Council Plans. All ingredients are listed in the New Zealand Inventory of Chemicals.

AUSTRALIA:

The ingredients in this formulation are compliant with the NICNAS regulations.

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP)	Not allocated
Applicable prohibitions and notifications/licensing requirements	Not listed
Agricultural and Veterinary Chemicals Act	Not listed
Listing in the Australian Inventory of Chemical Substances (AICS)	Ingredients are listed
Additional information	Not applicable

16. Other Information

Abbreviations

ADG code	Australian code for the transport of dangerous goods by road and rail.
AICS	Australian Inventory of Chemical Substances
Approval Code	not applicable – non hazardous.
CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
Controls Matrix	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
EC₅₀	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
ERMA	Environmental Risk Management Authority (now EPA)
EPA	Environmental Protection Agency (previously known as ERMA)
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD₅₀	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
MSDS (SDS)	Material Safety Data Sheet (or Safety Data Sheet)
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID) http://www.epa.govt.nz/hs/compliance/chemicals.html , for specific chemicals.
EPA Transfer Gazettes	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004)
Controls Matrix	Part of the EPA New Zealand User Guide to the HSNO Control Regulations
WES 2013	The NZ Workplace Exposure Standards Effective from 2013, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz .
Other References:	Suppliers SDS

Review

Date	Reason for review
May 2015	Not applicable – new SDS

Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email info@datachem.co.nz or phone: +64 9 940 30 80.

