

## 1. Identification of Substance & Company

### Product

<b>Product name</b>	Rapidome Part A
<b>Other names</b>	not assigned
<b>Product codes</b>	231012
<b>HSNO approval</b>	HSR002670
<b>Approval description</b>	Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2017
<b>UN number</b>	2206
<b>DG class</b>	6.1
<b>Proper Shipping Name</b>	ISOCYANATES, TOXIC, N.O.S.
<b>Packaging group</b>	III
<b>Hazchem code</b>	2WE
<b>Uses</b>	Part A of a two part polyurethane doming resin

### Company Details

<b>Company</b>	<b>Sign Supplies Ltd</b>
<b>Physical Address</b>	2/99 Carbine Rd, Mt Wellington, Auckland 1060, New Zealand
<b>Telephone</b>	0800 113 631
<b>Fax</b>	(+64) 9 525 6373
<b>Website</b>	www.signsupplies.co.nz

**Emergency Telephone Number: 0800 764 766**

## 2. Hazard Identification

### Approval

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002670, Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2017): The substance has been classified as hazardous according to the criteria in the Hazardous substances (Minimum Degrees of Hazard) Notice 2017.

### Classes

### Hazard Statements

6.1D (inhalation)	H332 - Harmful if inhaled.
6.3A	H315 - Causes skin irritation.
6.4A	H319 - Causes serious eye irritation.
6.5A	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
6.5B	H317 - May cause an allergic skin reaction.

### SYMBOLS

# DANGER



### Other Classifications

NOTE: this substance contains isophorone diisocyanate. This substance is classed in other jurisdictions (e.g. EU, RSA) as acute toxicity (Inhalation, vapour) cat 2, H330. However the vapour pressure is very low.

### Precautionary Statements

- P102 - Keep out of reach of children.
- P103 - Read label before use.
- P260 - Do not breathe vapours.
- P264 - Wash hands thoroughly after handling.
- P271 - Use only outdoors or in a well-ventilated area.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P284 - Wear respiratory protection.
- P304+P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- P310 - Immediately call a POISON CENTRE or doctor/physician.

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.  
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
 P363 - Wash contaminated clothing before reuse.  
 P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
 P405 - Store locked up.

### 3. Composition / Information on Ingredients

Component	CAS/ Identification	Conc (%)
Isophorone Diisocyanate	4098-71-9	>20-25%
Ingredients not contributing to HSNO classes	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 call the National Poisons Centre if you feel that you may have been poisoned or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

Recommended first aid facilities      Ready access to running water is required. Accessible eyewash is required.

#### Exposure

<b>Swallowed</b>	IF SWALLOWED: Do NOT induce vomiting. Give a glass of water to drink. Contact a doctor if experiencing symptoms.
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Skin contact</b>	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Inhaled</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTRE or doctor/physician.

#### Advice to Doctor

Treat symptomatically. Consider exposure to isocyanate and possible allergic responses. Sensitisation can result in severe responses to relatively low exposure in some individuals.

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

### 5. Firefighting Measures

<b>Fire and explosion hazards:</b>	There are no specific risks for fire/explosion for this chemical. It is not classed as flammable.
<b>Suitable extinguishing substances:</b>	Carbon dioxide, extinguishing powder, foam, fog sprays.
<b>Unsuitable extinguishing substances:</b>	Unknown.
<b>Products of combustion:</b>	Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
<b>Protective equipment:</b>	No special measures are required.
<b>Hazchem code:</b>	2WE

### 6. Accidental Release Measures

<b>Containment</b>	If greater than 1000L is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to storm water.
<b>Emergency procedures</b>	In the event of spillage alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Shut off all possible sources of ignition. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Do not use sawdust. Prevent by whatever means possible any spillage from entering drains, sewers,

<b>Clean-up method</b>	or water courses. (If this occurs contact your regional council immediately). Use absorbent (soil, sand or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazard. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
<b>Disposal</b>	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.
<b>Precautions</b>	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation.

**7. Storage & Handling**

<b>Storage</b>	Avoid storage of harmful substances with food. Store out of reach of children. Store in original container only protected from direct sunlight in a dry, cool well ventilated area. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Do not store above 25°C. Avoid contact with incompatible substances as listed in Section 10.
<b>Handling</b>	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 3mg/m<sup>3</sup> for respirable particulates and 10mg/m<sup>3</sup> for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds	Ingredient	WES-TWA*	WES-STEL
	Isophorone Diisocyanate	0.02mg/m <sup>3</sup>	0.07mg/m <sup>3</sup>

**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 at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. 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**

<b>Eyes</b>		Avoid contact with eyes. Use safety glasses and or chemical splash goggles if splashes are possible. Select eye protection in accordance with AS/NZS 1337.
<b>Skin</b>		Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves. Neoprene, Nitrile, Latex or butyl rubber gloves are recommended. Protective gloves or suitably resistant material must comply with AS 2161. Replace frequently. Gloves should be checked for tears or holes before use. Protective clothing must comply with AS 2919, AS3765.1 or AS3765.2. PVC or rubber boots must comply with AS/NZS 2210.2 and selected and maintained in accordance with AS/NS2210.1. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking. Wash hands after handling.
<b>Respiratory</b>		A respirator with an organic vapour cartridge and particulate filter when airborne concentrations approach the WES (section 8). Respirators must have filters appropriate to the duty and comply with AS/NZS1716 and selected, used and maintained in accordance with AS/NS 1715. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Fit testing and clear guidelines and training for use and maintenance of PPE are necessary.

**WES Additional Information**  
Not applicable

## 9. Physical & Chemical Properties

<b>Appearance</b>	low viscosity liquid, clear, water white
<b>Odour</b>	pungent odour
<b>pH</b>	NA
<b>Vapour pressure</b>	<0.01mmHg @ 20°C
<b>Viscosity</b>	500-100cps @ 25°C
<b>Boiling point</b>	NA
<b>Volatile materials</b>	NA
<b>Freezing / melting point</b>	NA
<b>Solubility</b>	reacts with water
<b>Specific gravity / density</b>	1.1 @ 20°C
<b>Flash point</b>	NA
<b>Danger of explosion</b>	NA
<b>Auto-ignition temperature</b>	NA
<b>Upper &amp; lower flammable limits</b>	NA
<b>Corrosiveness</b>	non corrosive

## 10. Stability & Reactivity

<b>Stability</b>	Stable
<b>Conditions to be avoided</b>	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
<b>Incompatible groups</b>	May react with alcohols, ammonia, amines, aqueous acids and alkalis (exothermic). With water/moisture: carbon dioxide is produced; pressure may build up inside closed containers (danger of bursting). High humidity may harden contents of container or cause valve blockage.
<b>Hazardous decomposition products</b>	Carbon monoxide, traces of hydrogen cyanide, oxides of nitrogen.
<b>Hazardous reactions</b>	This substance reacts with water. The reaction may become progressively vigorous and can be violent at high temperatures depending on the solvents present and how well it is mixed with water.

## 11. Toxicological Information

### Summary

IF SWALLOWED: Low oral toxicity, but will irritate mouth, throat and stomach.

IF IN EYES: causes serious eye irritation resulting in pain, watering, redness.

IF ON SKIN: causes skin irritation. May cause an allergic skin reaction, possible effects included dermatitis (skin swelling, reddening and blistering), Effects may re-occur upon exposure to extremely low levels of isocyanate and related chemicals. Effects may be delayed after initial exposure.

IF INHALED: toxic if inhaled. May irritate respiratory tract. May cause an allergic response which can include hyperactive airway, bronchitis (wheezing, gasping, unconsciousness), neurological effects (e.g., headache, euphoria, depression). Effects may re-occur upon exposure to extremely low levels of isocyanate and related chemicals (e.g., exposure to vehicle exhaust).

CHRONIC TOXICITY: Sensitisation is considered a long term (chronic) effect.

### Supporting Data

<b>Acute</b>	<b>Oral</b>	Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (oral, rat) for the mixture is >5,000 mg/kg. Data considered includes: Isophorone Diisocyanate 1270 mg/kg (rat).
	<b>Dermal</b>	Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (dermal, rat) for the mixture is >5000 mg/kg. Data considered includes: Isophorone Diisocyanate 4780 mg/kg (rabbit).
	<b>Inhaled</b>	Using LC <sub>50</sub> 's for ingredients, the calculated LC <sub>50</sub> (inhalation, rat) for the mixture is between 1 and 5mg/L (aerosol). Data considered includes: Isophorone Diisocyanate 0.67 mg/l (rat), EPA CCID.
	<b>Eye</b>	The mixture is considered to be an eye irritant. Isophorone Diisocyanate is classed as an eye irritant.
	<b>Skin</b>	The mixture is considered to be a skin irritant. Isophorone Diisocyanate is classed as a skin irritant, see also sensitisation below.
	<b>Chronic</b>	<b>Sensitisation</b>
<b>Mutagenicity</b>		No ingredient present at concentrations > 0.1% is considered a mutagen.
<b>Carcinogenicity</b>		No ingredient present at concentrations > 0.1% is considered a carcinogen.
<b>Reproductive / Developmental</b>		No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
<b>Systemic Aggravation of existing conditions</b>		No ingredient present at concentrations > 1% is considered a target organ toxicant. Individuals with impaired lung function or existing allergies (including dermatitis) should not work with this chemical – they are at increased risk of becoming sensitised with further potential health effects.

## 12. Ecological Data

### Summary

This mixture is not considered ecotoxic to the environment.

### Supporting Data

<b>Aquatic</b>	Using EC <sub>50</sub> 's for ingredients, the calculated EC <sub>50</sub> for the mixture is > 100 mg/L. Data considered includes: Isophorone Diisocyanate 1.8 mg/L (48hr, <i>Leuciscus idus</i> ), 83.7 mg/L (24hr, <i>Daphnia magna</i> ), 18.8 mg/l (72hr, <i>Scenedesmus subspicatus</i> ).
<b>Bioaccumulation</b>	No data
<b>Degradability</b>	No data
<b>Soil</b>	No evidence of soil toxicity.
<b>Terrestrial vertebrate</b>	This mixture does not trigger classification as ecotoxic towards terrestrial vertebrates.
<b>Terrestrial invertebrate</b>	No evidence of toxicity towards terrestrial invertebrates.
<b>Biocidal</b>	no data
<b>Environmental effect levels</b>	No EELs are available for this mixture or ingredients

## 13. Disposal Considerations

<b>Restrictions</b>	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
<b>Disposal method</b>	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
<b>Contaminated packaging</b>	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

## 14. Transport Information

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

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

<b>UN number:</b>	2206	<b>Proper shipping name:</b>	ISOCYANATES, TOXIC, N.O.S.
<b>Class(es)</b>	6.1	<b>Packing group:</b>	III
<b>Precautions:</b>	Not applicable.	<b>Hazchem code:</b>	2WE

## 15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002670, Surface Coatings and Colourants (subsidiary hazard) Group Standard 2017.

### Specific Controls

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Required if > 1000L is stored.
Certified handler	Not required.
Tracking	Not required.
Bunding & secondary containment	Required if > 1000L is stored.
Signage	Required if > 1000L is stored.
Hazardous substance location	Not required.
Flammable zone	Not required.
Fire extinguisher	Not required.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

### Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

## 16. Other Information

### Abbreviations

<b>Approval Code</b>	Approval HSR002670, Surface Coatings and Colourants (subsidiary hazard) Group Standard 2017 Controls, EPA. <a href="http://www.epa.govt.nz">www.epa.govt.nz</a>
<b>CAS Number</b>	Unique Chemical Abstracts Service Registry Number
<b>Ceiling</b>	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
<b>Controls Matrix</b>	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
<b>EC<sub>50</sub></b>	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
<b>EPA</b>	Environmental Protection Authority (New Zealand)
<b>HAZCHEM Code</b>	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
<b>HSNO</b>	Hazardous Substances and New Organisms (Act and Regulations)
<b>IARC</b>	International Agency for Research on Cancer
<b>LEL/UEL</b>	Lower Explosive Limit/ Upper Explosive Limit
<b>LD<sub>50</sub></b>	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
<b>LC<sub>50</sub></b>	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
<b>MSDS (SDS)</b>	Material Safety Data Sheet (or Safety Data Sheet)
<b>PES</b>	Prescribed Exposure Standard means a WES or a biological exposure standard that is prescribed in a regulation, a safe work instrument or an approval under HSNO (including group standards).
<b>STEL</b>	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
<b>TWA</b>	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
<b>UN Number</b>	United Nations Number
<b>WES</b>	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

### References

<b>Data</b>	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
<b>Controls</b>	EPA notices, <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> , Health and Safety at Work (Hazardous Substances) Regulations 2017, <a href="http://www.legislation.govt.nz">www.legislation.govt.nz</a>
<b>WES</b>	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – <a href="http://www.worksafe.govt.nz">www.worksafe.govt.nz</a> .
<b>Other References:</b>	Suppliers SDS, EU ECHA, ingredients SDS's, ChemIDplus

### Review

<b>Date</b>	Reason for review
November 2018	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). **The full formulation details of this substance were not available to Datachem LTD.** 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](mailto:info@datachem.co.nz) or phone: +64 9 940 30 80.

